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# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name D. L. Campbell Examiner # 71300 Date: \_\_\_\_\_  
 Address Box 303 Phone Number 303 441 928 Serial Number 10001 928  
 Mail Box and Bldg Room Location Box 303 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic and describe as specifically as possible the subject matter to be searched. Include the chemical species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples of relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention Zwitterionic Timers

Inventors (please provide full names): Steven Hamrick

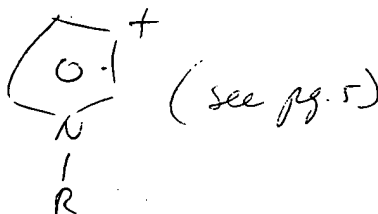
Earliest Priority Filing Date \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

$R_1 - SO_2 N SO_2 - R_2$

$R_1 - \text{alkyl sulfonyl fluoro}$

$R_2 = \text{pyridiniumyl}$



## STAFF USE ONLY

Searcher \_\_\_\_\_

Searcher Phone # \_\_\_\_\_

Searcher Location \_\_\_\_\_

## Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) \_\_\_\_\_

## Vendors and cost where applicable

STN \_\_\_\_\_

Dialog \_\_\_\_\_

Questel/Other \_\_\_\_\_



# ***STIC Search Report***

## ***Biotech-Chem Library***

**STIC Database Tracking Number: 104433**

**TO: Deborah Lambkin**

**Location:**

**Art Unit: 1626**

**September 24, 2003**

**Case Serial Number: 10041998**

**From: P. Sheppard**

**Location: CM1-1E03**

**Phone: (703) 308-4499**

**sheppard@uspto.gov**

### **Search Notes**

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FILE COVERS 1907 - 24 Sep 2003 VOL 139 ISS 13  
FILE LAST UPDATED: 23 Sep 2003 (20030923/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>  
=>

=> d stat que 117  
L1 STR

G1~SO2-N~SO2G1  
1 2 3 4 5

VAR G1=AK/CY  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
L3 5778 SEA FILE=REGISTRY SSS FUL L1  
L4 STR

F~G2~SO2-N~SO2G1  
6 1 2 3 4 5

VAR G1=AK/CY  
REP.G2=(1-10) C  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
L5 1150 SEA FILE=REGISTRY SUB=L3 SSS FUL L4  
L14 STR

F~~G2~~SO2·N~~SO2G1~~N<sup>7</sup>  
 6 1 2 3 4 5 +1

VAR G1=AK/CY  
 REP G2=(1-10) C  
 NODE ATTRIBUTES:  
 CHARGE IS E+1 AT 7  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE  
 L15 STR

F~~G2~~SO2·N~~SO2Cy  
 6 1 2 3 4 5

REP G2=(1-10) C  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
 L16 111 SEA FILE=REGISTRY SUB=L5 SSS FUL L14 OR L15  
 L17 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L16

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=> d ibib abs hitrn l17 1-42

L17 ANSWER 1 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:656749 HCAPLUS  
 DOCUMENT NUMBER: 139:197386  
 TITLE: Preparation of isoquinolinone derivatives as JNK  
 inhibitors  
 INVENTOR(S): Itoh, Fumio; Kimura, Hiroyuki; Igata, Hideki;  
 Kawamoto, Tomohiro; Sasaki, Mitsuru; Kitamura, Shuji  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
 SOURCE: PCT Int. Appl., 369 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003068750	A1	20030821	WO 2003-JP1429	20030212
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,			

LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL,  
 PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,  
 UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,  
 TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,  
 CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
 NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
 ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2002-35073 A 20020213  
 .JP 2002-251997 A 20020829

AB Claimed are JNK (c-Jun N-terminal kinase) inhibitors contg.  
 isoquinolinones or salts thereof. The second claim specifies that said  
 isoquinolinones are 1-isoquinolinones. Compds. of this invention in vitro  
 showed IC50 values of 0.0067 .mu.M to 0.095 .mu.M against JNK1.  
 Formulations are given.

IT **583837-34-7P**

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(prepn. of isoquinolinone derivs. as JNK inhibitors)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:432993 HCAPLUS

DOCUMENT NUMBER: 139:28625

TITLE: Positive photoresist compositions with suppressed edge  
 roughness

INVENTOR(S): Fujimori, Toru; Kawamura, Koichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 89 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003162061	A2	20030606	JP 2002-219789	20020729

PRIORITY APPLN. INFO.: JP 2001-279708 A 20010914

OTHER SOURCE(S): MARPAT 139:28625

AB The compns., useful for far UV radiation (e.g. excimer laser), comprise  
 (A) alicyclic group-contg. resins that increase their alkali-soly. in the  
 presence of acids, (B) photoacid generators (PAG), and (C) compds. having  
 sulfonimide structures in a mol. R1N(SO2R2)SO2R3 (R1 = H, halo, alkyl,  
 cycloalkyl, aryl, aralkyl, heterocyclic group; R2, R3 = alkyl, cycloalkyl,  
 aryl, aralkyl, heterocyclic group).

IT **537031-87-1**

RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
 use); USES (Uses)

(pos. photoresists contg. sulfonimides with suppressed edge roughness)

L17 ANSWER 3 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:335072 HCAPLUS

DOCUMENT NUMBER: 138:321759

TITLE: Aromatic imide and aromatic methyldynetrissulfonyl  
 compounds and method of making

INVENTOR(S): Hamrock, Steven J.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

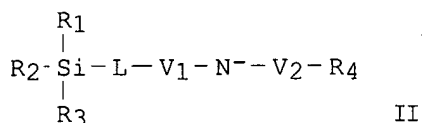
LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003035611	A1	20030501	WO 2002-US29230	20020913
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003092940	A1	20030515	US 2001-42024	20011025
PRIORITY APPLN. INFO.:		US 2001-42024 A 20011025		
OTHER SOURCE(S):		MARPAT 138:321759		
AB A method is provided for making arom.-imide and arom.-methylidynetrissulfonyl species by reaction of arom. species with a reactant according to formula (XS <sub>2</sub> ) <sub>m</sub> QH(SO <sub>2</sub> R <sub>1</sub> ) <sub>n</sub> wherein Q is C or N; wherein each X is independently selected from the group consisting of halogens, typically F or Cl; wherein each R <sub>1</sub> is independently selected from the group consisting of aliph. and arom. groups, which may or may not be satd., unsatd., straight-chain, branched, cyclic, heteroat., polymeric, halogenated, fluorinated or substituted; wherein m is greater than 0; wherein m + n = 2 when Q is N; and wherein m + n = 3 when Q is C. Ar may be derived from an arom. polymeric compd. In addn., compds. are provided according to the formula (ArS <sub>2</sub> ) <sub>m</sub> QH(SO <sub>2</sub> R <sub>1</sub> ) <sub>n</sub> useful as electrolytes wherein R <sub>1</sub> comprises a highly acidic group selected from sulfonic acid, carboxylic acid and phosphonic acid, and Ar is derived from an arom. compd. Thus, poly(methylstyrene) was treated with ClSO <sub>2</sub> NHSO <sub>2</sub> CF <sub>3</sub> to give SO <sub>2</sub> NHSO <sub>2</sub> CF <sub>3</sub> group-contg. poly(methylstyrene).				
IT <b>215815-18-2P</b> RL: IMF (Industrial manufacture); PREP (Preparation) (prepn. of arom. sulfonimide and arom. methylidynetrissulfonyl compds.)				
REFERENCE COUNT:		4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT		

L17 ANSWER 4 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:240281 HCAPLUS  
 DOCUMENT NUMBER: 138:274059  
 TITLE: Electrolyte composition, photoelectric converter, and photoelectric cell  
 INVENTOR(S): Watanabe, Tetsuya  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003092153	A2	20030328	JP 2001-283172	20010918
PRIORITY APPLN. INFO.:		JP 2001-283172 20010918		
OTHER SOURCE(S):		MARPAT 138:274059		

GI



AB The compn. contains a salt I represented (Q<sub>1</sub>)<sub>n1</sub>.cntdot.(X)<sub>n2</sub> [Q = cation; X = Si contg. anion; n<sub>1</sub>, n<sub>2</sub> = integer 1-3]. Preferably, X has the formula II [R<sub>1-4</sub> = H or substituent; L, V<sub>1</sub>, V<sub>2</sub> = .gtoreq.2 valent bonding group; V<sub>1</sub> and/or V<sub>2</sub> = -CO-, -SO-, -SO<sub>2</sub>-or -PO(OR<sub>5</sub>)--; R<sub>5</sub> = alkyl or aryl group]. The converter has a conductive support, a photosensitive layer, a counter electrode and a charge-transporting layer contg. the above electrolyte compn. The photoelec. cell uses the above converter.

IT 503444-73-3 503444-79-9

RL: DEV (Device component use); USES (Uses)  
(comps. of electrolyte solns. contg. org. imide salts for photoelectrochem. cells)

L17 ANSWER 5 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:43041 HCAPLUS

DOCUMENT NUMBER: 138:107174

TITLE: High temperature ionic poly(aromatic) polymers and membranes

INVENTOR(S): Lu, Kelly

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003013817	A1	20030116	US 2001-888843	20010626
PRIORITY APPLN. INFO.:			US 2001-888843	20010626

AB The polyaryl amide (CONH), sulfonyl amide (SO<sub>2</sub>NH), imide ((CO)<sub>2</sub>N), imidazole ((NH)(N:)C), oxazoles ((NH)(O)C), thiazoles ((NH)(S)C), amino (NH) group, ether (O), sulfide (S), sulfone (SO<sub>2</sub>), polymers or some combination of these have .gtoreq.1 type of ionic functional group selected from (a) pendent ionic group: -QSO<sub>3</sub>(M), or -QSO<sub>2</sub>N(M)SO<sub>2</sub>R, or -SO<sub>2</sub>N(M)SO<sub>2</sub>R, (b) linking ionic group: -SO<sub>2</sub>N(M)SO<sub>2</sub>-, -QSO<sub>2</sub>N(M)SO<sub>2</sub>-, or -QSO<sub>2</sub>N(M)SO<sub>2</sub>Q-, where Q = fluorinated alkylene or fluorinated alkoxy group with 1-12 C atoms, and R = fluorinated alkyl or fluorinated alkoxy group with 1-12 C atoms, and M = H, Li, Na, K, and other suitable metal ions or org. bases. The new polymers can be random or blocked copolymers and can be crosslinked. The polymer can be made into polymeric membranes or composite membranes suitable for fuel cell, electrochem. applications, or selective permeable applications.

IT 485393-89-3P 485393-96-2P 485393-98-4P  
485394-00-1P 485394-13-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(high temp. ionic poly(arom.) polymers for membranes)

L17 ANSWER 6 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:656355 HCAPLUS

DOCUMENT NUMBER: 137:203955

TITLE: Electrolyte composition, battery, photoelectrochemical cell, and secondary nonaqueous electrolyte battery



INVENTOR(S): Ono, Michio  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002246066	A2	20020830	JP 2001-38118	20010215
PRIORITY APPLN. INFO.:			JP 2001-38118	20010215

AB The electrolyte contains a polyoxyalkylene, having liq. cryst. cationic or anionic side chain or liq. cryst. counter ions. The polyoxyalkylene is -(CH<sub>2</sub>-CHA-O)-.y h (A = cationic or anionic group, y = counter ion) and optionally -(CH<sub>2</sub>-CHR-O)- [R = H, (substituted) alkyl, or (substituted) aryl group]. Batteries, secondary nonaq. batteries, and photoelectrochem. cells use the electrolyte.

IT **452977-56-9**  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (polyoxyalkylene with liq. cryst. ionic side chains or counter ions for electrolytes in batteries and photoelectrochem. cells)

L17 ANSWER 7 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2002:534080 HCAPLUS  
 DOCUMENT NUMBER: 137:94549  
 TITLE: Conductivity enhancers for cationically polymerizable compositions capable of being coated by electrostatic assistance  
 INVENTOR(S): Hamrock, Steven J.; Pham, Phat T.  
 PATENT ASSIGNEE(S): 3m Innovative Properties Company, USA  
 SOURCE: U.S., 19 pp., Cont.-in-part of U. S. 5,962,546.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6420607	B1	20020716	US 1997-937519	19970925
US 5962546	A	19991005	US 1997-847206	19970501
PRIORITY APPLN. INFO.:			US 1997-847206	A2 19970501
			US 1996-622102	B2 19960326
			US 1996-643428	B2 19960508
			WO 1996-US11397	W 19960709

AB The compns. comprise .gtoreq.1 cationically polymerizable monomer(s), .gtoreq.1 cationic initiator(s), and .gtoreq.1 nonvolatile cond. enhancer(s) having anionic and cationic portions which are sol. in the monomer(s) and which do not interfere with cationic polymn. A cond. enhancing salt compd. consists of a cation selected from H, an alkali metal, an alk. earth metal, or a Group Va, VIa, or VIIa onium cation and an anion selected from (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>C-SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OMe and (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>C-SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OMe, Q-p-C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N-(SO<sub>2</sub>CF<sub>3</sub>), (CH<sub>2</sub>:CH<sub>2</sub>-p-C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N-SO<sub>2</sub>CF<sub>2</sub>CF<sub>2</sub>)<sub>2</sub>, and CH<sub>2</sub>:CH<sub>2</sub>-p-C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N-(SO<sub>2</sub>C<sub>8</sub>F<sub>17</sub>). Some (polymerizable) imide and methide salts are described. Thus, 0.3 g of lithium styrenyltrifluoromethylbis(sulfonyl)imide was dissolved in 20 mL Et<sub>2</sub>O, and the resulting soln. was cooled to 0.degree., 0.50 g m-chloroperbenzoic acid (MCPBA) was added to the soln., the soln. was stirred for 54 h at ambient temp., then another 0.65 g MCPBA was added and the reaction mixt. was allowed to stir overnight to give lithium (1,2-epoxyethylphenyl)trifluoromethyl bis(sulfonyl)imide.

IT 215815-22-8P 215815-23-9P 215815-28-4P

RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (cond. enhancers for cationically polymerizable compns. capable of being coated by electrostatic assistance)

IT 210226-98-5

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cond. enhancers for cationically polymerizable compns. capable of being coated by electrostatic assistance)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 8 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:531846 HCAPLUS

DOCUMENT NUMBER: 137:217352

TITLE: Synthesis of Polyphosphazenes with Sulfonimide Side Groups

AUTHOR(S): Hofmann, Michael A.; Ambler, Catherine M.; Maher, Andrew E.; Chalkova, Elena; Zhou, Xiangyang Y.; Lvov, Serguei N.; Allcock, Harry R.

CORPORATE SOURCE: The Energy Institute, Department of Chemistry, Pennsylvania State University, University Park, PA, 16802, USA

SOURCE: Macromolecules (2002), 35(17), 6490-6493

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis of a sulfonimide bearing phenolic compd. and its use in the classical macromol. substitution approach to produce a phosphazene (-P=N-backbone) polymer bearing pendent sulfonimide groups was reported. Membranes were cast from 1,4-dioxane and were characterized before and after crosslinking with respect to their proton cond., water swelling, and thermal properties. A blended membrane of the sulfonimide functionalized polymer with poly(vinylidene fluoride) was also evaluated.

IT 457101-93-8P 457101-94-9P 457101-96-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (in prepn and property of polyphosphazenes with sulfonimide side groups)

IT 457101-95-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn and property of polyphosphazenes with sulfonimide side groups)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 9 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:354009 HCAPLUS

DOCUMENT NUMBER: 136:372231

TITLE: Electrolyte composition for nonaqueous secondary battery and solar photoelectrochemical cell

INVENTOR(S): Ono, Michio; Wariishi, Koji; Yasuda, Takayasu; Qian, Chang-yi

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 41 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002055046	A1	20020509	US 2001-933716	20010822
JP 2002170426	A2	20020614	JP 2001-248879	20010820
PRIORITY APPLN. INFO.:			JP 2000-250828	A 20000822
			JP 2001-248879	A 20010820

AB An electrolyte compn. which is excellent in durability and charge transport performance, and an electrochem. battery in which deterioration of the charge transport performance with time is minimized are disclosed. The electrolyte compn. includes therein a salt which comprises an anion which contains a mesogen group, and an alkyl or alkenyl group having 6 carbons or more in the structure of the anion, and an org. or inorg. cation.

IT **422555-89-3 422555-91-7**

RL: DEV (Device component use); USES (Uses)  
(electrolyte compn. for nonaq. secondary battery and solar photoelectrochem. cell)

L17 ANSWER 10 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:239437 HCAPLUS

DOCUMENT NUMBER: 137:109397

TITLE: Synthesis of (all-rac)-.alpha.-tocopherol using fluorinated NH-acidic catalysts

AUTHOR(S): Bonrath, Werner; Haas, Alois; Hoppmann, Eike; Netscher, Thomas; Pauling, Horst; Schager, Frank; Wildermann, Angela

CORPORATE SOURCE: Research and Development, Roche Vitamins Ltd, Basel, 4070, Switz.

SOURCE: Advanced Synthesis & Catalysis (2002), 344(1), 37-39  
CODEN: ASCAF7; ISSN: 1615-4150

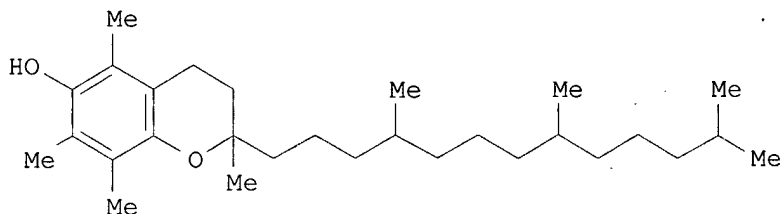
PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:109397

GI



I

AB The synthesis of (all-rac)-.alpha.-tocopherol (I) starting from trimethylhydroquinone and isophytol using fluorinated NH-acidic catalysts is described. The scope and limitations of this type of catalyst are discussed. The advantages of this new procedure are high yield and selectivity, no waste problem and mild reaction conditions. The best results in the synthesis of I (94% yield) using NH-acidic compds. are obtained in polar solvents. The used catalyst could be recovered.

IT **200728-68-3 400608-36-8**

RL: CAT (Catalyst use); USES (Uses)  
(synthesis of (all-rac)-.alpha.-tocopherol using fluorinated NH-acidic catalysts)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 11 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:138923 HCAPLUS

DOCUMENT NUMBER: 136:183967  
 TITLE: Process for manufacturing all-rac.-.alpha.-tocopherol in the presence of a bis(perfluoroalkanesulfonyl or pentafluorobenzenesulfonyl)imide catalyst  
 INVENTOR(S): Bonrath, Werner; Haas, Alois; Hoppmann, Eike; Pauling, Horst  
 PATENT ASSIGNEE(S): Roche Vitamins A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1180517	A1	20020220	EP 2001-119322	20010810
EP 1180517	B1	20030730		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 246181	E	20030815	AT 2001-1119322	20010810
BR 2001003412	A	20020326	BR 2001-3412	20010816
JP 2002128775	A2	20020509	JP 2001-246843	20010816
US 2002072619	A1	20020613	US 2001-931663	20010816
US 6482961	B2	20021119		
CN 1339437	A	20020313	CN 2001-125595	20010817
			EP 2000-117761	A 20000818

## PRIORITY APPLN. INFO.:

OTHER SOURCE(S): CASREACT 136:183967; MARPAT 136:183967

AB A process, for the manuf. of all-racemic-.alpha.-tocopherol (I) via the acid-catalyzed condensation of trimethylhydroquinone with phytol or isophytol, is characterized by carrying out the condensation in the presence of a bis(perfluorohydrocarbyl)imide or a metal bis(perfluorohydrocarbyl)imide, [(R1SO2)3N]xR2 [R1 = perfluoroalkyl, CnF2n+1, pentafluorophenyl; R2 = H, B, Mg, Al, Si, Sc, Ti, V, VO, Mn, Fe, Co, Ni, Cu, Zn, Y, Zr, Rh, Pd, Ag, Sn, La, Ce, Pr, Nd, Eu, Dy, Yb, Hf, Pt, Au; n = 1 - 10; x = valency of proton (1) or metal cation (1-4)], as a catalyst in an org. solvent. Thus, trimethylhydroquinone was suspended in PhMe and catalytic bis(pentafluoroethanesulfonyl)amine was added, after heating to 50-150.degree., isophytol was added over 20 mins., after 30 mins. more, the solvent is removed, giving 89.6% crude I.

IT 200728-68-3 400608-36-8 400608-37-9

RL: CAT (Catalyst use); USES (Uses)

(process for manufg. all-rac.-.alpha.-tocopherol by acid-catalyzed condensation of trimethylhydroquinone with phytol or isophytol in the presence of a bis(perfluoroalkanesulfonyl or pentafluorobenzenesulfonyl)imide catalyst)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 12 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:107841 HCAPLUS

DOCUMENT NUMBER: 136:175464

TITLE: Synthesis of zwitterionic iodonium compounds for resist compositions transmitting light in low UV portion of spectrum

INVENTOR(S): Desmarteau, Darryl; Montanari, Vittorio; Thomas, Brian H.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002015826	A1	20020207	US 2001-832174	20010410

PRIORITY APPLN. INFO.: US 2000-196515P P 20000411

OTHER SOURCE(S): MARPAT 136:175464

AB Disclosed are the methods of synthetic prepn. of zwitterionic iodonium compds. for resist compns. transmitting light in low UV portion of spectrum. Photoresist compns., or photoacids, are used in etching circuit pathways on the surface of microelectronic components. Iodonium compds. generate a strong acid under short wavelength irradiation, which is capable of etching the polymeric surface coating of a silicon wafer. The strong acid is the conjugate acid of the counter anion. Larger counterions generate acids that diffuse to a lesser extent in the polymer resist matrix, producing better image resolution. Given the particular anion, the solubility of its diary iodonium salts will depend upon which aromatic rings are used on the iodonium molecule. A zwitterionic structure of the iodonium molecule, having both positive and negative charges on the same molecule species, can be used as photoacid compound in the photoresist step of microchip manufacture.

IT **396733-80-5**  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (intermediate; synthesis of zwitterionic iodonium compounds for resist compounds transmitting light in low UV portion of spectrum)

IT **396733-88-3P 396733-91-8P 396733-94-1P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (iodonium zwitterion; synthesis of zwitterionic iodonium compounds for resist compounds transmitting light in low UV portion of spectrum)

IT **396733-83-8**  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (synthesis of zwitterionic iodonium compounds for resist compounds transmitting light in low UV portion of spectrum)

IT **396733-77-0DP**, crystd. with DMSO  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (synthesis of zwitterionic iodonium compounds for resist compounds transmitting light in low UV portion of spectrum)

IT **396733-77-0**  
 RL: TEM (Technical or engineered material use); USES (Uses) (synthesis of zwitterionic iodonium compounds for resist compounds transmitting light in low UV portion of spectrum)

L17 ANSWER 13 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:560091 HCAPLUS

DOCUMENT NUMBER: 135:137825

TITLE: Sulfonated perfluorovinyl functional monomers

INVENTOR(S): Desmarteau, Darryl D.; Martin, Charles W.; Ford, Lawrence A.; Xie, Yuan

PATENT ASSIGNEE(S): 3m Innovative Properties Co., USA

SOURCE: U.S., 11 pp.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6268532	B1	20010731	US 2000-586844	20000605
WO 2001094305	A1	20011213	WO 2000-US25589	20000918

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1286961 A1 20030305 EP 2000-966743 20000918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

US 2002007083 A1 20020117 US 2001-827990 20010406

US 6384167 B2 20020507

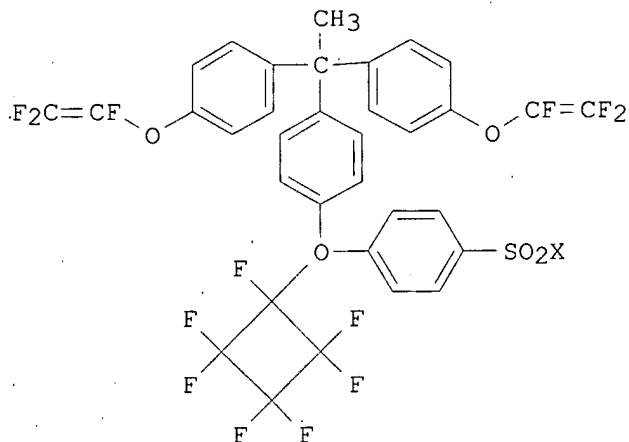
PRIORITY APPLN. INFO.:

US 2000-586844 A 20000605

WO 2000-US25589 W 20000918

OTHER SOURCE(S): MARPAT 135:137825

GI



I

AB The present invention provides a monomer having the formula A-B, wherein A is a trifluorovinylphenoxyphenyl group substituted with SO<sub>2</sub>F, SO<sub>2</sub>Cl, SO<sub>3</sub>H, SO<sub>2</sub>N(M)SO<sub>2</sub>CF<sub>3</sub> and SO<sub>2</sub>N(M)SO<sub>2</sub>R<sub>f</sub> (M = suitable cation; R<sub>f</sub> = C1-10 fluorocarbon or fluorinated ether group) and B is selected from trifluorovinylphenoxy group or A, provided that, when B is trifluorovinylphenoxy, the orientation of B is meta or para to the trifluorovinylphenoxy group of A; when B is A, the bond joining the A groups is para to the trifluorovinylphenoxy group of each A. The present invention also provides a monomer according to Formula I: wherein X is F, Cl, or N(M)SO<sub>2</sub>R<sub>f</sub>, wherein M is any suitable cation and R<sub>f</sub> is a C1-10 fluorocarbon or fluorinated ether group.

IT 352008-63-0P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(monomer; manuf. of sulfonated perfluorovinyl functional monomers)

IT 352008-62-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(precursor; manuf. of sulfonated perfluorovinyl functional monomers)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 14 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2001:416891 HCAPLUS  
 DOCUMENT NUMBER: 135:21210  
 TITLE: Method for preparing imides from sulfonyl fluorides  
 INVENTOR(S): Blau, Hanne Anna Katharina  
 PATENT ASSIGNEE(S): E.I. Du Pont De Nemours and Company, USA  
 SOURCE: PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001040174	A1	20010607	WO 2000-US32672	20001201
W: AU, CA, CN, JP, KR, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1237858	A1	20020911	EP 2000-980900	20001201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2003515584	T2	20030507	JP 2001-541861	20001201
US 2002193499	A1	20021219	US 2002-129168	20020501
PRIORITY APPLN. INFO.: US 1999-168539P P 19991202				
WO 2000-US32672 W 20001201				
OTHER SOURCE(S): MARPAT 135:21210				
AB Imide having a sulfonyl fluoride functional group is prepd. by reaction of a bimetal amide salt with a non-polymeric sulfonyl fluoride or a polymeric sulfonyl fluoride. Thus C3F9SO2 NNa2 was reacted with CF2:CFOCF2CF(CF3)OCF2CF2SO2CF3 7.97 g at 110.degree. for 16 h to give CF2:CFOCF2CF(CF3)OCF2CF2SO2N(Na)SO2(CF2)3CF3.				
IT 342646-21-3P				
RL: IMF (Industrial manufacture); PREP (Preparation) (prepg. imides from sulfonyl fluorides)				
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L17 ANSWER 15 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2000:565965 HCAPLUS  
 DOCUMENT NUMBER: 133:253080  
 TITLE: New sulfonimide acid containing perfluorocyclobutane (PFCB) aromatic polyethers for potential use in fuel cell applications  
 AUTHOR(S): Ford, L. A.; Smith, D. W., Jr.; DesMarteau, D. D.  
 CORPORATE SOURCE: Department of Chemistry, Clemson University, Clemson, SC, 29634, USA  
 SOURCE: Polymeric Materials Science and Engineering (2000), 83, 25-26  
 CODEN: PMSDGG; ISSN: 0743-0515  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The thermal cyclopolymerization of aryl trifluorovinyl ether monomers containing the sulfonimide functionality gave the first example of perfluorocyclobutane polymers produced from monomers containing the sulfonimide acid group. These polymers form free standing flexible films that are thermally stable, highly conductive, and highly tunable.  
 IT 296239-80-0P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (prepn. of sulfonimide acid-containing perfluorocyclobutane aromatic polyethers for potential use in fuel cell applications)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 16 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2000:565958 HCAPLUS  
DOCUMENT NUMBER: 133:267385  
TITLE: New aromatic perfluorovinyl ether monomers containing the sulfonimide acid functionality  
AUTHOR(S): Ford, L. A.; Smith, D. W., Jr.; DesMarteau, D. D.  
CORPORATE SOURCE: Department of Chemistry, Clemson University, Clemson, SC, 29634, USA  
SOURCE: Polymeric Materials Science and Engineering (2000), 83, 10-11  
CODEN: PMSEDG; ISSN: 0743-0515  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Thermal cyclopolymerization of an aryl trifluorovinyl ether monomer containing the sulfonimide functionality gave perfluorocyclobutane (PFCB) polymers containing this group. DSC results show that monomers containing highly electron deficient functionalities act similar to classical PFCB polymers. Homo- and copolymers of these monomers can possibly be used in fuel cell applications.

IT 296239-79-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; new arom. perfluorovinyl ether monomers containing sulfonimide acid functionality)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 17 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2000:398858 HCAPLUS  
DOCUMENT NUMBER: 133:61292  
TITLE: Characteristics of the organic lithium salts containing C and N elements as anion center  
AUTHOR(S): Kita, Fusaji; Sakata, Hideo; Kawakami, Akira; Kamizori, Haruki; Sonoda, Takaaki; Nagashima, Hideo; Nie, Jin; Yagupolskii, Yurii L.  
CORPORATE SOURCE: Battery R&D Laboratory, Hitachi Maxell Ltd, Osaka, 567-8567, Japan  
SOURCE: Proceedings - Electrochemical Society (2000), 99-25, 480-484  
CODEN: PESODO; ISSN: 0161-6374  
PUBLISHER: Electrochemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Imide salts show high conductivities and high oxidation potentials and reasonably high aluminum (Al) dissolution potentials. Methide salt ((CF<sub>3</sub>SO<sub>2</sub>)<sub>3</sub>CLi) shows lower conductivity than imide salt ((CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>NLi) but higher oxidation stability and higher Al dissolution potential. Methide salt ((CF<sub>3</sub>CH<sub>2</sub>OSO<sub>2</sub>)<sub>3</sub>CLi) shows the highest Al dissolution potential (5.5 V vs. Li/Li<sup>+</sup>). The battery discharge performances of imide salts were as good as those of LiPF<sub>6</sub>. The discharge capacities of ((CF<sub>3</sub>)<sub>2</sub>CHOSO<sub>2</sub>)<sub>2</sub>NLi-cell were 599, 580, and 573 mAh at 0.2 C (140 mA), 1.0 C (600 mA), 2.0 C (1200 mA), respectively, but those of LiPF<sub>6</sub> were 590, 577, 567 mAh, respectively. The cycle characteristics of 1.0 mol/l (C<sub>2</sub>F<sub>5</sub>SO<sub>2</sub>)<sub>2</sub>NLi-cell with 0.05 mol/l LiPF<sub>6</sub> was better than that of LiPF<sub>6</sub>-cell. The (C<sub>4</sub>F<sub>9</sub>SO<sub>2</sub>) (CF<sub>3</sub>SO<sub>2</sub>)NLi-cell showed lower capacity at 1C (600 mA) rate than the (C<sub>2</sub>F<sub>5</sub>SO<sub>2</sub>)<sub>2</sub>NLi-cell, but better cycle characteristics compared with the (C<sub>2</sub>F<sub>5</sub>SO<sub>2</sub>)<sub>2</sub>NLi-cell. The ((CF<sub>3</sub>)<sub>2</sub>CHOSO<sub>2</sub>)<sub>2</sub>NLi-cell showed the best cycle characteristics.

IT 200728-69-4  
RL: DEV (Device component use); USES (Uses)



(org. lithium salts contg. C and N elements as anion center for battery electrolytes)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 18 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:209933 HCAPLUS

DOCUMENT NUMBER: 132:246369

TITLE: Use of non-peptidyl compounds for the treatment of insulin-related ailments

INVENTOR(S): Helmerhorst, Erik; Plewright, Brian Scott

PATENT ASSIGNEE(S): Curtin University of Technology, Australia

SOURCE: PCT Int. Appl., 129 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000016798	A1	20000330	WO 1999-AU786	19990917
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2345155	AA	20000330	CA 1999-2345155	19990917
AU 9960707	A1	20000410	AU 1999-60707	19990917
EP 1115422	A1	20010718	EP 1999-947113	19990917
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRIORITY APPLN. INFO.:			AU 1998-6091	A 19980922
			WO 1999-AU786	W 19990917

OTHER SOURCE(S): MARPAT 132:246369

AB The present invention relates to the use of at least a non-peptidyl compd. as a biol. modulator of insulin activity or insulin-related activity for the treatment of insulin-related diseases. Non-peptidyl compds. of the present invention exert their effects by mimicking amino acids spatially located on insulin, enabling those compds. to bind to the insulin receptor or insulin-like receptor causing biol. modulation of the activity of the receptor. A method for identifying a non-peptidyl compd. comprises the steps of: (1) comparing the 3D structure of the non-peptidyl compd. with a 3D pharmacophore of an active site of insulin, and (2) selecting a non-peptidyl compd. The compds. may act either as agonists or antagonists of insulin or insulin-like activity. Pharmaceutical compns. contg. chem. compds. capable of modulating the biol. activity of insulin are also claimed. For example, 4,4'-methylenebis[3-hydroxy-2-naphthalenecarboxylic acid] (IM 025) was an antagonist of insulin action. IM 025 caused a dose-dependent decrease in the incorporation of 32P into FYF peptide in insulin-stimulated tubes and inhibited glucose transport in 3T3L1 cells, with IC50 of 150 and 170 .mu.M, resp. 2,4-Dichloro-6-[N-(trifluoromethanesulfonyl)sulfamoylphenyl]-3,5-dichloro-2-hydroxybenzene] sulfonate (IM 103) was an agonist of insulin action displaying a biphasic biol. dose response curve with an apex at concn. of 110 .mu.M and an apparent EC50 of 45 .+- . 7 .mu.M.

IT 262429-92-5 262429-95-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

## (Uses)

(non-peptidyl compds. modulating insulin activity by mimicking amino acid residues spatially located on insulin and binding to insulin receptors)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 19 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:180105 HCAPLUS

DOCUMENT NUMBER: 132:239412

TITLE: Non-aqueous and hardly flammable electrolytic solution and lithium secondary battery comprising the electrolytic solution

INVENTOR(S): Nakano, Tomoharu

PATENT ASSIGNEE(S): Sanyo Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000082494	A2	20000321	JP 1998-267274	19980903

PRIORITY APPLN. INFO.: JP 1998-267274 19980903

AB This non-aq. and hardly flammable electrolytic soln. contains (A) an oligomer or a polymer having sulfonylimide Li salt in side chains and (B) an oligomer or a polymer having imidazolium salt of sulfonylimide in side chains. A secondary battery comprises a cathode, an anode, and the defined non-aq. and hardly flammable electrolytic soln. The battery may be a Li secondary battery and the anode contains Li or Li+ as active mass. The electrolytic soln. has excellent inflammable property, high withstand voltage, and elec. cond. even at low temp. and the secondary battery contg. the electrolytic soln. has excellent charging and discharging cycle life and sustainable capacity.

IT **215815-17-1 261737-09-1**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (electrolytic soln. contg.; inflammable electrolytic soln. contg. defined polymer or oligomer for lithium secondary battery with high voltage and capacity)

L17 ANSWER 20 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:119088 HCAPLUS

DOCUMENT NUMBER: 132:207879

TITLE: Effect of N-substituents on protonation chemistry of trichlorophosphazenes

AUTHOR(S): Xu, Kang; Angell, C. Austen

CORPORATE SOURCE: Department of Chemistry, Arizona State University, Tempe, AZ, 85287-1604, USA

SOURCE: Inorganica Chimica Acta (2000), 298(1), 16-23

CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 132:207879

AB The protonation chem. of trichlorophosphazene (R1-N:PCl3) with sulfonic acids (R2SO3H) was affected by the N-substituents R1, yielding bis(sulfonyl)imides contg. both R1 and R2, and mixed sulfonylphosphonyl imides contg. either R1 or R2. In the formation of the latter a hitherto unobserved chem. occurred. An intramol. "imine SN2" mechanism was proposed to rationalize the reactions obsd. Thus, reaction of Cl3P:NMe with ClSO3H gave 38% Cl3P(O)NHMe, whereas reaction of ClSO2N:PCl3 with

FSO3H gave 70% ClSO2NHSO2F.

IT 174788-87-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 21 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:626449 HCAPLUS

DOCUMENT NUMBER: 131:245556

TITLE: Electrolytes containing mixed fluorocarbon/hydrocarbon  
imide and methide salts for batteries

INVENTOR(S): Hamrock, Steven J.; Pham, Phat Tan

PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9949529	A1	19990930	WO 1998-US16114	19980804
W:				
AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,				
DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG,				
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,				
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,				
UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,				
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,				
CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6063522	A	20000516	US 1998-47039	19980324
CA 2325505	AA	19990930	CA 1998-2325505	19980804
AU 9886848	A1	19991018	AU 1998-86848	19980804
EP 1066657	A1	20010110	EP 1998-938293	19980804
R: DE, FR, GB, IT				
JP 2002508576	T2	20020319	JP 2000-538398	19980804
PRIORITY APPLN. INFO.:			US 1998-47039	A 19980324
			WO 1998-US16114	W 19980804

AB The electrolytes contain imide salts of formula: (1)  $1/nMn+N(SO_2Rf)(XRh)$ , in which  $Rf = F$  or  $C1-12$  acyclic or  $C3-12$  cyclic perfluoroalkyl group or having a catenary heteroatom;  $Rh = C2-18$  aliph. group or with a catenary heteroatom,  $C4-18$  aliph. or cycloaliph group, (substituted) arom. group or a reactive group;  $X = SO_2$  or  $C:O$ ; and  $Mn+ =$  a cation of  $N$  valence; (2)  $1/nMn+.cntdot.RhX-N-SO_2-(R'f)-SO_2-N-XRh.cntdot.1/nMn+$ , in which  $R'f = C1-12$  perfluoroalkylene group or having a cyclic moiety and/or a catenary heteroatom; (3)  $1/nMn+.cntdot.RfSO_2N-XR'hX-N-SO_2Rf.cntdot.1/nMn+$ , in which  $R'h =$  divalent org. group; or (4)  $1/nMn+.cntdot.(R'hX-N-SO_2-R'f-SO_2-N-X-p.cntdot.1/nMn+$ , or a methide salt of the formula  $1/nMn+C-(SO_2Rf)(XR'f)(XR'f)$ , in which  $R'h = C1-18$  aliph. group or  $C3-12$  cycloaliph. group or with a catenary heteroatom, (substituted) arom. or alkylarom. group contg.  $C1-4$  alkyl group; a reactive group; or the  $R'h$  being a  $C2-3$  alkylene group or a phenylene group joined to the  $X$ 's at 1,2 or 1,3 positions and a matrix material.

IT 210226-98-5P 215815-17-1P 215815-18-2P  
215815-20-6P 215815-22-8P 215815-23-9P  
215815-28-4P 244250-79-1P 244250-81-5P  
244250-89-3P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(electrolytes contg. mixed fluorocarbon/hydrocarbon imide and methide  
salts for batteries)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 22 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1999:495270 HCAPLUS  
 DOCUMENT NUMBER: 131:145247  
 TITLE: Polymerizable bisulfonyl derivatives and their uses  
 for preparing ion-exchanging membranes  
 INVENTOR(S): Michot, Christophe; Armand, Michel  
 PATENT ASSIGNEE(S): Hydro-Quebec, Can.  
 SOURCE: PCT Int. Appl., 51 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938842	A1	19990805	WO 1999-CA83	19990129
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 973734	A1	20000126	EP 1999-903551	19990129
EP 973734	B1	20030604		
R: DE, FR, GB, IT				
JP 2001522376	T2	20011113	JP 1999-538750	19990129
EP 1312603	A1	20030521	EP 2003-4041	19990129
R: DE, FR, GB, IT				
US 2003023016	A1	20030130	US 2002-200528	20020723
PRIORITY APPLN. INFO.:				
			CA 1998-2228466	A 19980130
			CA 1998-2236196	A 19980428
			EP 1999-903551	A3 19990129
			WO 1999-CA83	W 19990129
			US 1999-390650	B1 19990907

AB The title membranes are made up of a polymer obtained from .gtoreq.1 of [TSO2YSO2T']- M+ (T, T' = org. radical having .gtoreq.1 polymerizable group such as unsatn. or openable ring, M = cation, Y = N or alkylene). Moreover said polymers are useful in electrochem. cells, in a chlorine-sodium electrolysis process, as separator in an electrochem. prepn. of org. and inorg. compds., as separator between an aq. phase and an org. phase, or as catalyst for Diels-Alder addns., Friedel-Craft reactions, aldol condensations, cationic polymn., and acetal formation. A typical membrane was manufd. by photopolymn. of film of a soln. contg. 1 g (4-CF2:CFC6H4SO2)2N-Li+, 10 g Li 4-trifluorovinylbenzenesulfonate, 250 mg Irgacure 651, and 35 mL 50:50 propylene carbonate-diglyme mixt. on a polypropylene support.

IT **235437-48-6P**  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (membranes; polymerizable bisulfonyl deriv. salts for manuf. of ion-exchanging membranes)

IT **220284-51-5P**  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; polymerizable bisulfonyl deriv. salts for manuf. of ion-exchanging membranes)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 23 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1999:481296 HCAPLUS  
 DOCUMENT NUMBER: 131:115999

TITLE: Preparation of sulfonimides  
 INVENTOR(S): Sakaguchi, Hiroaki; Sakai, Shigenori; Takase, Hiroshige  
 PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11209338	A2	19990803	JP 1998-8141	19980120
PRIORITY APPLN. INFO.:			JP 1998-8141	19980120
OTHER SOURCE(S): CASREACT 131:115999; MARPAT 131:115999				
AB	M(Rf1SO2NSO2Rf2)n (Rf1, Rf2 = C1-12 linear or branched perfluoroalkyl, fluoroalkyl, fluoroalkenyl, fluoroaryl; M = alkali metal ion, alk. earth metal ion, n = same no. as no. of metal ion valent), useful as Lewis acid catalysts and electrolytes (no data), are prepd. by reaction of RfSO2Cl (Rf = group corresponding to Rf1 and Rf2) with anhyd. NH3, R13N (R1 = C1-5 alkyl) or heterocyclic amines, and optional RfSO2NH2 (Rf = group corresponding to Rf1 and Rf2), reaction of sulfonimide substituted ammonium salts or sulfimide acid heterocyclic amine salts with alkali metal or alk. earth metal hydroxides, oxides, or carbonates to release amine, and distg. amines. CF3SO2Cl (22.1 g) was reacted with 19.9 g NEt3 and NH3 in acetonitrile for 4 h and reacted with LiOH aq. soln. at 85.degree. to give 17.1 g Li(CF3SO2)2N.			
IT	<b>233278-24-5P</b> RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. of sulfonimides by quaternization of sulfonyl chlorides with NH3 and amines and substitution with metal compds.)			
IT	<b>201303-23-3P</b> RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation) (prepn. of sulfonimides by quaternization of sulfonyl chlorides with NH3 and amines and substitution with metal compds.)			

L17 ANSWER 24 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1999:357936 HCAPLUS  
 DOCUMENT NUMBER: 131:157787  
 TITLE: A new protonation chemistry of phosphazenes and the formation of bis(sulfonyl)imides  
 AUTHOR(S): Xu, Kang; Day, Natalie D.; Austen Angell, C.  
 CORPORATE SOURCE: Department of Chemistry, Arizona State University, Tempe, USA  
 SOURCE: Inorganic Chemistry Communications (1999), 2(6), 261-264  
 CODEN: ICCOFP; ISSN: 1387-7003  
 PUBLISHER: Elsevier Science S.A.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 131:157787  
 AB The protonation of N-sulfonyl trichlorophosphazenes (R1N:PCl3 ; R1 = Cl, Me, Ph) with sulfonic acids (R2SO3H; R2 = F, Cl, CF3, Me) was successfully used as a facile synthesis route for bis(sulfonyl)imides. Also the formation of protonated imides is strongly affected by the acid strength of the proton donors and the N-substituents (R1). When R1 is a good leaving group (CF3C(O), CF3SO2), a hitherto unobserved protonation chem. occurs, producing mixed sulfonylphosphonylimides, e.g. CF3SO2NHP(O)Cl2. A tentative rationale is proposed for the novel chem. of phosphazenes.  
 IT **174788-87-5P**, N-(Trifluoromethylsulfonyl)benzenesulfonamide

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(prepn. and conversion to lithium salt)

IT **215815-18-2P**, Lithium (phenylsulfonyl)(trifluoromethylsulfonyl)amide

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 25 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:96230 HCAPLUS

DOCUMENT NUMBER: 130:154396

TITLE: Perfluorovinyl ionic compounds and their use in  
conductive materials

INVENTOR(S): Armand, Michel; Michot, Christophe

PATENT ASSIGNEE(S): Acep Inc., Can.; Centre National de la Recherche  
Scientifique; Rhodia Chimie

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9905126	A1	19990204	WO 1998-FR1664	19980727
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 968196	A1	20000105	EP 1998-941465	19980727
R: DE, FR, GB, IT				
JP 2001509818	T2	20010724	JP 1999-509452	19980727
US 6288187	B1	20010911	US 1999-269268	19990325
US 2002026021	A1	20020228	US 2001-898380	20010705
US 6426397	B2	20020730		
US 2002193540	A1	20021219	US 2002-171656	20020617
US 6593019	B2	20030715		

PRIORITY APPLN. INFO.:

CA 1997-2212974	A	19970725
WO 1998-FR1664	W	19980727
US 1999-269268	A3	19990325
US 2001-898380	A3	20010705

OTHER SOURCE(S): MARPAT 130:154396

AB The invention concerns ionic compds. wherein the neg. charge is highly delocalized. The compds. contain at least a perfluorovinyl group and at least a group selected among O or .gtoreq.1 of NCN, (CN)2, NSO2R, C[SO2R]2, or a pentacyclic group comprising at least a group N, CCN, CR, CCOR, or CSO2R (R = Y, YO, YS, Y2N, or F; Y = H or org. group). The compds. and/or their polymers are useful for prepg. ionic conductors, (poly)electrolytes and selective membranes. A typical polyelectrolyte membrane was manufd. by deposition of a suspension contg. 40 g p-CF2:CF2C6H4SO2N-(SO2CF3) K+, 2.9 g (p-CF2:CF2C6H4SO2)2N- Et4N+, 100 mL DMF, 7.5 g silica, and 600 mg 1,2-diphenyl-1-oxo-2,2-dimethoxyethane on to a PET film, UV irradiation, and removal from the PET film.

IT **210227-58-0P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)

(monomer precursor; perfluorovinyl ionic compds. for manuf. of ionic  
conductors, (poly)electrolytes and selective membranes)

IT **220284-51-5P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)

(monomer; perfluorovinyl ionic compds. for manuf. of ionic conductors,  
(poly)electrolytes and selective membranes)

IT 220284-52-6P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(perfluorovinyl ionic compds. for manuf. of ionic conductors,  
(poly)electrolytes and selective membranes)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 26 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:96208 HCAPLUS

DOCUMENT NUMBER: 130:168015

TITLE: Ionic perfluorosulfonimide compounds with delocalized  
anionic charge, and their use as components of ionic  
conductors or catalysts

INVENTOR(S): Armand, Michel; Michot, Christophe; Yagupolskii,  
Yurii; Yagupolskii, Lev; Bezdudny, Andrej;  
Kondratenko, Natalya

PATENT ASSIGNEE(S): Acep Inc., Can.; Universite de Montreal; Centre  
National de la Recherche Scientifique; Institute of  
Organic Chemistry

SOURCE: PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9905100	A1	19990204	WO 1998-FR1663	19980727
W: CA, JP, UA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 928287	A1	19990714	EP 1998-941464	19980727
R: DE, FR, GB, IT				
JP 2001507043	T2	20010529	JP 1999-509451	19980727
US 6340716	B1	20020122	US 1999-269264	19990325
US 2002013381	A1	20020131	US 2001-931076	20010817
US 6548567	B2	20030415		

PRIORITY APPLN. INFO.: CA 1997-2211465 A 19970725  
WO 1998-FR1663 W 19980727  
US 1999-269264 A3 19990325

OTHER SOURCE(S): MARPAT 130:168015

AB The invention concerns ionic compds. of formula  $[R_1X_1(:Z_1)Q-X_2(:Z_2)R_2]_m$   
Mm+ [I; in which Mm+ is a cation of valence m; each  $X_i = S:Z_3$ ,  $S:Z_4$ , PR3,  
or PR4; Q = N, CR5, CCN, or CSO2R5; each  $Z_i = :O$ , :NC.tplbond.N,  
:C(C.tplbond.N)2, :NS(:Z)2R6, or :C[S(=Z)2R6]2; each  $R_i = Y$ , YO, YS, Y2N,  
or F; Y = monovalent org. radical, or repeat unit of a polymeric fabric].  
I are useful for prepg. materials with ionic conduction, electrolytes, as  
catalysts for polymn. and other org. reactions, and for doping polymers.  
For instance, butanesulfonyl chloride was condensed with CF3SO2NH2 using  
DABCO, and the product treated with satd. KCl and AcOH to give cryst.  
BuSO2N(K)SO2CF3. This was treated with (COCl)2 and DMF in MeCN, followed  
by treatment with CF3SO2NH2 and DABCO, and then workup with aq. KCl and  
AcOH, to give title compd. CF3SO2N-S(:O)(Bu):NSO2CF3 K+. The latter was  
converted to the corresponding Li+ salt using LiBF4, and the Li salt was  
incorporated in poly(ethylene oxide) of mass 106 to give a film with cond.  
>2 .times. 10-5 S/cm at 25.degree..

IT 220431-13-0P, 3,5-Bis(trifluoromethyl)-N-

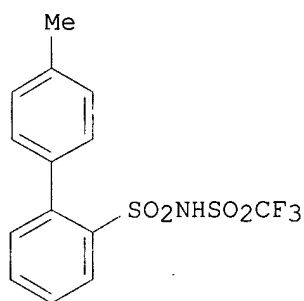
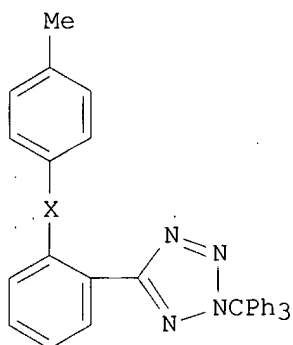
[(trifluoromethyl)sulfonyl]benzenesulfonamide potassium salt

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(fluorination; prepn. of delocalized anionic perfluorosulfonimide  
derivs. as conductors and catalysts)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 27 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1999:44064 HCAPLUS  
DOCUMENT NUMBER: 130:182416  
TITLE: Ortho-substituted biphenyl intermediates in the  
synthesis of nonpeptide antagonists of the angiotensin  
II receptor  
AUTHOR(S): Fedyuk, D. V.; Maletina, I. I.; Yagupol'skii, L. M.  
CORPORATE SOURCE: Onst. Org. Khim., NAN Ukrainy, Kiev, Ukraine  
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition)  
(1997), 63(11-12), 47-52  
CODEN: UKZHAU; ISSN: 0041-6045  
PUBLISHER: Institut Obshchei i Neorganicheskoi Khimii im. V. I.  
Vernadskogo NAN Ukrainy  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
GI



AB Prepns. of tetrazole derivs. I (X = a bond, CF2CF2) and sulfonamide II  
were described.

IT 220503-13-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(ortho-substituted biphenyl intermediates in prepn. of nonpeptide  
antagonists of angiotensin II receptor)

L17 ANSWER 28 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1998:745023 HCAPLUS  
DOCUMENT NUMBER: 130:14981  
TITLE: Fluorinated sulfonamide and sulfone derivatives  
INVENTOR(S): Hamrock, Steven J.; Pham, Phat Tan  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
SOURCE: PCT Int. Appl., 68 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9850349	A1	19981112	WO 1997-US17244	19970925
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR,				



KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG,  
 UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,  
 GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,  
 GN, ML, MR, NE, SN, TD, TG

AU 9745949 A1 19970925 AU 1997-45949 19970925  
 EP 980353 A1 20000223 EP 1997-944461 19970925  
 EP 980353 B1 20030604

R: DE, FR, IT

JP 2001526653 T2 20011218 JP 1998-548024 19970925

PRIORITY APPLN. INFO.:

US 1997-847206 A 19970501

WO 1997-US17244 W 19970925

OTHER SOURCE(S): MARPAT 130:14981

AB Compns. capable of being coated onto a substrate with electrostatic assistance comprise cationically polymerizable monomer(s) and cationic initiator(s) and contain fluorinated sulfonamide and sulfone derivs. as nonvolatile cond. enhancers having anionic and cationic portions which are sol. in the monomer(s) and which do not interfere with cationic polymn. when the anionic portion is a noncoordinating C-contg. anion. The compns. may further comprise disocn. enhancing agent(s), oligomer(s) or polymer(s), preferably co-reactive, free-radically curable monomer(s), free-radical generating initiator(s), leveling agents, and other additives or adjuvants to impart specific properties to the polyimd. compn. Thus, addn. of 3.5% LiN(SO<sub>2</sub>CF<sub>3</sub>)<sub>2</sub> to a curable mixt. of UV 9300 (epoxy silicone) 25, limonene 75, and GE 9380C (UV initiator) 3 g reduced the resistance from too high to measure to 893 k.OMEGA., in the preferred range for electrostatic spraying. After being sprayed onto a substrate the compn. was polyimd. by UV irradsn. to give a release coating.

IT 215815-17-1P 215815-18-2P 215815-20-6P

215815-22-8P 215815-23-9P 215815-24-0P

215815-28-4P

RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. of fluorinated sulfonamide and sulfone derivs.)

IT 210226-98-5P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of fluorinated sulfonamide and sulfone derivs.)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 29 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:659147 HCAPLUS

DOCUMENT NUMBER: 129:343244

TITLE: Spectrophotometric acidity scale of strong neutral Bronsted acids in acetonitrile

AUTHOR(S): Leito, Ivo; Kaljurand, Ivori; Koppel, Ilmar A.; Yagupolskii, Lev M.; Vlasov, Vladislav M.

CORPORATE SOURCE: Institute of Chemical Physics Department of Chemistry, Tartu University, Tartu, EE2400, Estonia

SOURCE: Journal of Organic Chemistry (1998), 63(22), 7868-7874  
 CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A continuous, self-consistent quant. UV-vis spectrophotometric pKa scale of strong acids in MeCN was created. The 36 compds. studied include phenols, phenylmalonitriles, sulfonimides, sulfonic acids, and sulfonimides modified with Yagupolskii's superacceptor substituents. The scale spans .apprx.13 pKa units and consists of 74 independent equil.-const. measurements, each describing the relative acidity of 2 acids. The method of measurements eliminates the need for direct detn. of the acidity of the medium. The most acidic compds. studied have pKa

values of .apprx.4 in MeCN, and can be regarded as true superacids. The scale is anchored to the pKa value 11.0 for picric acid. The status of 2,4,6-(CF<sub>3</sub>SO<sub>2</sub>)<sub>3</sub>C<sub>6</sub>H<sub>2</sub>OH as the most acidic phenol presently known (pKa = 4.9) is confirmed. The replacement of an :O fragment with :NSO<sub>2</sub>CF<sub>3</sub> in a -SO<sub>2</sub>- group in arom. sulfonimides results in an acidity increase of >105 times. The most acidic compd. in the scale is 4-ClC<sub>6</sub>H<sub>4</sub>SO(:NSO<sub>2</sub>CF<sub>3</sub>)NHSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-4 (pKa = 3.75). The present results together with those from other authors furnish a unified scale of acidity in MeCN ranging from 4-27 pKa units, and set solid ground for pKa measurements of strong acids in MeCN.

IT 174788-87-5 174788-89-7 174788-91-1  
215395-07-6

RL: PRP (Properties)

(UV-spectrophotometric acidity scale for strong, neutral Bronsted acids in acetonitrile)

REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 30 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:464360 HCAPLUS

DOCUMENT NUMBER: 129:122975

TITLE: Salts of perfluorinated sulfonamides or sulfinamides and their use as ionic conductors and as catalysts  
INVENTOR(S): Armand, Michel; Choquette, Yves; Gauthier, Michel; Michot, Christophe

PATENT ASSIGNEE(S): Centre National de la Recherche Scientifique (CNRS), Fr.; Hydro-Quebec

SOURCE: Eur. Pat. Appl., 65 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 850920	A2	19980701	EP 1997-403187	19971230
EP 850920	A3	19980708		
EP 850920	B1	20020911		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2194127	AA	19980630	CA 1996-2194127	19961230
CA 2199231	AA	19980905	CA 1997-2199231	19970305
CA 2244979	AA	19980709	CA 1997-2244979	19971230
CA 2248242	AA	19980709	CA 1997-2248242	19971230
CA 2248244	AA	19980709	CA 1997-2248244	19971230
CA 2248246	AA	19980709	CA 1997-2248246	19971230
CA 2248303	AA	19980709	CA 1997-2248303	19971230
CA 2248304	AA	19980709	CA 1997-2248304	19971230
WO 9829358	A2	19980709	WO 1997-CA1008	19971230
WO 9829358	A3	19981008		
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 9829399	A1	19980709	WO 1997-CA1009	19971230
W: CA, JP, US				
WO 9829389	A1	19980709	WO 1997-CA1010	19971230
W: CA, JP, US				
WO 9829396	A1	19980709	WO 1997-CA1011	19971230
W: CA, JP, US				
WO 9829877	A1	19980709	WO 1997-CA1012	19971230
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 9829388	A1	19980709	WO 1997-CA1013	19971230

W: CA, JP, US

EP 889863	A2	19990113	EP 1997-951051	19971230
EP 889863	B1	20030507		
R: DE, FR, GB, IT				
EP 890176	A1	19990113	EP 1997-951052	19971230
EP 890176	B1	20010620		
R: DE, FR, GB, IT				
JP 2000508114	T2	20000627	JP 1998-529517	19971230
JP 2000508346	T2	20000704	JP 1998-529516	19971230
JP 2000508676	T2	20000711	JP 1998-529514	19971230
JP 2000508677	T2	20000711	JP 1998-529515	19971230
JP 2000508678	T2	20000711	JP 1998-529518	19971230
JP 2002514245	T2	20020514	JP 1998-529513	19971230
US 6120696	A	20000919	US 1998-125792	19980828
US 6171522	B1	20010109	US 1998-101811	19981119
US 6333425	B1	20011225	US 1998-101810	19981119
US 6228942	B1	20010508	US 1998-125798	19981202
US 6395367	B1	20020528	US 1998-125799	19981202
US 6319428	B1	20011120	US 1998-125797	19981203
US 6365068	B1	20020402	US 2000-609362	20000630
US 6576159	B1	20030610	US 2000-638793	20000809
US 2001024749	A1	20010927	US 2001-826941	20010406
US 6506517	B2	20030114		
US 2002009650	A1	20020124	US 2001-858439	20010516
US 2002102380	A1	20020801	US 2002-107742	20020327
US 2003052310	A1	20030320	US 2002-253035	20020924
US 2003066988	A1	20030410	US 2002-253970	20020924

PRIORITY APPLN. INFO.:

CA 1996-2194127	A	19961230
CA 1997-2199231	A	19970305
WO 1997-CA1008	W	19971230
WO 1997-CA1009	W	19971230
WO 1997-CA1010	W	19971230
WO 1997-CA1011	W	19971230
WO 1997-CA1012	W	19971230
WO 1997-CA1013	W	19971230
US 1998-101810	A3	19981119
US 1998-101811	A3	19981119
US 1998-125798	A3	19981202
US 1998-125799	A3	19981202
US 1998-125797	A1	19981203
US 2000-638793	A1	20000809
US 2001-858439	A1	20010516

OTHER SOURCE(S): MARPAT 129:122975

AB The salts comprise a cation and R1SO<sub>x</sub>N-Z in amts. to balance the pos. and neg. charges, where R1 is halo, perhaloalkyl (optionally interrupted by O, S, or NH) or -alkaryl, R2CF<sub>2</sub>, R2CF<sub>2</sub>CF<sub>2</sub>, R2CF<sub>2</sub>CF(CF<sub>3</sub>), or CF<sub>3</sub>CFR<sub>2</sub>; R2 is an org. radical which is not perhalogenated; Z is an electron-withdrawing group, which may be the residue of a polymer or may be a polyvalent group attached to other N-SO<sub>x</sub>R1 moieties; and x = 1 or 2. Thus, a mixt. of 40 mmol acrylonitrile and 60 mmol 4-CH<sub>2</sub>:CHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N-SO<sub>2</sub>CF<sub>3</sub> Li<sup>+</sup> was copolymd. in 82% yield by use of 1,1'-azobis(cyclohexanecarbonitrile) in THF, and the copolymer was used at 20% concn. as a binder in both the carbon anode and the carbon-LiNiO<sub>2</sub> cathode of a battery contg. a gelled electrolyte.

IT 210227-35-3P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(salts of perfluorinated sulfonamides or sulfinamides for use as ionic conductors and as catalysts)

IT 210227-69-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(salts of perfluorinated sulfonamides or sulfinamides for use as ionic conductors and as catalysts)

IT 210226-88-3P 210227-58-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(salts of perfluorinated sulfonamides or sulfinamides for use as ionic conductors and as catalysts)

IT 210226-98-5P 210227-00-2P 210227-01-3P  
210227-02-4P 210227-04-6P 210227-13-7P  
210227-14-8P 210227-49-9P 210227-59-1P  
210227-60-4P 210227-70-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(salts of perfluorinated sulfonamides or sulfinamides for use as ionic conductors and as catalysts)

IT 210227-63-7P 210227-81-9P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(salts of perfluorinated sulfonamides or sulfinamides for use as ionic conductors and as catalysts)

L17 ANSWER 31 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:776471 HCAPLUS

DOCUMENT NUMBER: 128:77533

TITLE: On the characteristics of electrolytes with new lithium imide salts

AUTHOR(S): Kita, Fusaji; Kawakami, Akira; Nie, Jin; Sonoda, Takaaki; Kobayashi, Hiroshi

CORPORATE SOURCE: Ibaraki, Ushitora, Hitachi Maxell Ltd., Osaka 567, 1-1-88, Japan

SOURCE: Journal of Power Sources (1997), 68(2), 307-310  
CODEN: JPSODZ; ISSN: 0378-7753

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In our continuous study on org. lithium salts, we found that the imide salt (RfSO<sub>2</sub>)(R'fSO<sub>2</sub>)NLi shows high cond. in org. solvents, and that the modification of the imide salts change the anodic oxidn. potential and the dissoln. potential of aluminum current collector. Lithium imide with long fluoroalkyl groups such as (C<sub>4</sub>F<sub>9</sub>SO<sub>2</sub>)(CF<sub>3</sub>SO<sub>2</sub>)NLi and the new ester-type imide salts, ((CF<sub>3</sub>)<sub>2</sub>CHOSO<sub>2</sub>)<sub>2</sub>NLi, do not dissolve the aluminum collector up to 4.8 and 4.3 V, resp. We also examd. the polymer analog of the ester-type imide salt such as (-CH<sub>2</sub>(CF<sub>2</sub>)<sub>4</sub>CH<sub>2</sub>OSO<sub>2</sub>N(Li)SO<sub>2</sub>O-)<sub>9-10</sub>.

IT 200728-69-4

RL: DEV (Device component use); USES (Uses)

(electrolyte; characteristics of electrolytes with new lithium imide salts)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 32 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:311263 HCAPLUS

DOCUMENT NUMBER: 124:342658

TITLE: Preparation of sulfonimides and their salts

INVENTOR(S): Sakaguchi, Hiroaki; Fujii, Kenji; Sakai, Shigenori; Kobayashi, Yoshiyuki; Kita, Yasushi

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19533711	A1	19960314	DE 1995-19533711	19950912

JP 08081436	A2	19960326	JP 1994-217532	19940912
JP 3117369	B2	20001211		
US 5723664	A	19980303	US 1995-525439	19950907
FR 2724380	A1	19960315	FR 1995-10617	19950911
FR 2724380	B1	19980102		

PRIORITY APPLN. INFO.: JP 1994-217532 A 19940912

OTHER SOURCE(S): CASREACT 124:342658; MARPAT 124:342658

AB R1SO2NHSO2R2 and Mn+(R1SO2N-SO2R2)n [R1,R2 = (per)fluoroalkyl, fluoroalkenyl, fluoroaryl, etc.; Mn+ = pos. ion of valence n] were prepd. by, e.g., treating RSO2F (R = groups cited for R1,R2) with anhyd. NH3 in the presence of an amine. Thus, CF3SO2F was stirred 3h at 20.degree. with NH3 and Et3N in an autoclave and the product treated with LiOH to give 94% (CF3SO2)2NLi.

IT 176719-72-5P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of sulfonimides and their salts)

L17 ANSWER 33 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:105834 HCAPLUS

DOCUMENT NUMBER: 124:231973

TITLE: [(Trifluoromethyl)sulfonyl]imino and bis[[(trifluoromethyl)sulfonyl]imino] derivatives of arenesulfonic acids

AUTHOR(S): Yagupol'skii, L. M.; Kondratenko, N. V.; Iksanova, S. V.

CORPORATE SOURCE: Inst. Org. Khim., Kiev, Ukraine

SOURCE: Zhurnal Organicheskoi Khimii (1995), 31(5), 747-52

CODEN: ZORKAE; ISSN: 0514-7492

PUBLISHER: Nauka

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB 4-RC6H4S(O)(NSO2CF3)F (I; R = H, Cl, NO2) were prepd. from benzenesulfonyl chlorides. Reaction of I with CF3SO2NNA SiMe3, followed by treatment with H2SO4, gave 4-RC6H4S(O)(NSO2CF3)NHSO2CF3, in which the NH proton migrated between N atoms.

IT 174788-88-6P 174788-90-0P 174788-92-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and acidification of)

IT 174788-87-5P 174788-89-7P 174788-91-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L17 ANSWER 34 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:875556 HCAPLUS

DOCUMENT NUMBER: 124:86520

TITLE: Reactions of fluorine-containing N-sulfinylamides with carboxylic acids and acid anhydrides

AUTHOR(S): Zhu, Shizheng; Xu, Bin; Zhang, Jie

CORPORATE SOURCE: Shanghai Institute of Organic Chemistry, Chinese Academy of Science, 345 Lingling Lu, Shanghai, 200032, Peop. Rep. China

SOURCE: Journal of Fluorine Chemistry (1995), 74(2), 203-6

CODEN: JFLCAR; ISSN: 0022-1139

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:86520

AB Heating N-sulfinylperfluoroalkane sulfonylamides, RfSO2NSO, or N-sulfinylpentafluoroaniline, C6F5NSO, with carboxylic acids in the presence of catalytic amts. of SOCl2 gave N-perfluoroalkane sulfonylamides, RfSO2NHCOR, or N-pentafluorophenylamides, C6F5NHCOR, resp.

Acid anhydrides reacted similarly with RfSO<sub>2</sub>NSO or C<sub>6</sub>F<sub>5</sub>NSO to form N-perfluoroalkane sulfonylimides or N-pentafluorophenylimides.

IT 172510-88-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(reactions of fluorine-contg. N-sulfinylamides with carboxylic acids or acid anhydrides)

L17 ANSWER 35 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:490229 HCAPLUS  
DOCUMENT NUMBER: 122:326592  
TITLE: Photosensitive composition containing sulfoneimide polymer  
INVENTOR(S): Kawamura, Koichi  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07028242	A2	19950131	JP 1993-168111	19930707
JP 3078152	B2	20000821		

PRIORITY APPLN. INFO.: JP 1993-168111 19930707

AB The compn. contains a polymer contg. sulfonimide group LSO<sub>2</sub>NR<sub>2</sub>SO<sub>2</sub>R<sub>1</sub> [R<sub>1</sub>, R<sub>2</sub> = (substituted) arom. group, (substitute) alkyl; L = bond to polymer]. The polymer generates free radicals or acids by irradiation. The compn. is esp. useful for manuf. of printing plates without development process.

IT 163427-96-1

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(photosensitive compn. contg. sulfoneimide polymer for printing original plates)

L17 ANSWER 36 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

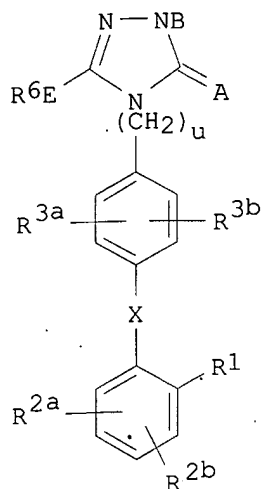
ACCESSION NUMBER: 1995:234501 HCAPLUS  
DOCUMENT NUMBER: 122:10037  
TITLE: Preparation of substituted 1,2,4-triazoles bearing acidic functional groups as angiotensin II antagonists  
INVENTOR(S): Ashton, Wallace T.; Chakravarty, Prasun K.; Chang, Linda L.; Greenlee, William J.; Kim, Dooseop; Mantlo, Nathan B.; Patchett, Arthur A.  
PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
SOURCE: U.S., 75 pp. Cont.-in-part of U.S. Ser. No. 875,038, abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5281614	A	19940125	US 1992-970360	19921102
CA 2109524	AA	19921111	CA 1992-2109524	19920505
US 5436259	A	19950725	US 1993-154883	19931118

PRIORITY APPLN. INFO.:  
US 1991-698505 B2 19910510  
US 1992-875038 B2 19920501  
US 1992-970360 A2 19921102

OTHER SOURCE(S): MARPAT 122:10037

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AB Title compds. I [R1 = R22SO2NHSO2, R22O2CNHSO2, NCNHSO2, (R24)2P(O)NHSO2, R24P(O)NHCO, substituted heterocyclyl wherein R22 = (substituted) Ph, -C1-6 alkyl, -C2-6 alkenyl, -C2-6 alkynyl, heteroaryl, (substituted) C3-7 cycloalkyl, etc.; R24 = aryl, (substituted) C1-6 alkyl, etc.; R2a, R2b = H, halo, (substituted) amino, O2N, F3C, (substituted) C1-6 alkyl, heterocyclyl, etc.; R2aR2b = Ph; R3a = H, halo, C1-6 alkyl, C1-6 alkoxy, etc.; R3b = H, halo, C1-6 alkyl, C1-5 alkylcarbonyloxy, C3-5 cycloalkyl, C1-6 alkoxy, etc; R3aR3b = Ph, biphenyl, (substituted) naphthyl; A = O, S, R21N wherein R21 = H, (substituted) Ph, -C1-6 alkyl, etc.; B = (substituted) C1-10 alkyl, halo, H, (substituted) aryl, etc.; E = bond, (substituted) amino, alkylsulfonyl, CHOH, alkoxy, CO; R6 = (substituted) Ph, -C1-6 alkyl, -heteroaryl, -C3-7 cycloalkyl, etc.; X = bond, CO, O, S, etc.; u = 1,2] or a salt thereof, showing activity as angiotensin II antagonists, are prepd. N-[[2'-carboxybiphenyl-4-yl]methyl]phthalimide (prepn. given) was converted in 4 steps to 4-[[2'-(tert-butoxycarbonyl)biphenyl-4-yl]-5-n-butyl]-2,4-dihydro-3H-1,2,4-triazole-3-thione which was treated with F3CCO2H to give I (R1 = HO2C, A = S, B = R2a = R2b = R3a = R3b = H, R6E = Bu, X = bond, u = 1).

IT 159544-63-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of, as angiotensin II antagonist)

L17 ANSWER 37 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1994:301651 HCAPLUS  
DOCUMENT NUMBER: 120:301651  
TITLE: Imides and their salts for use as surfactants  
INVENTOR(S): Pohmer, Klaus; Doerzbach-Lange, Cornelia;  
Doerzbach-lange, Cornelia Dr; Moretto, Hans Heinrich;  
Wienand, Manfred; Wienand, Manfred Dr  
PATENT ASSIGNEE(S): Bayer A.-G., Germany  
SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 571832	A2	19931201	EP 1993-107824	19930513
EP 571832	A3	19940105		
EP 571832	B1	19960117		
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
DE 4217366	A1	19931202	DE 1992-4217366	19920526
ES 2085075	T3	19960516	ES 1993-107824	19930513
CA 2096816	AA	19931127	CA 1993-2096816	19930521
JP 06116229	A2	19940426	JP 1993-144208	19930524
US 5502251	A	19960326	US 1995-383702	19950201
PRIORITY APPLN. INFO.:			DE 1992-4217366	19920526
			US 1993-60995	19930514

OTHER SOURCE(S): MARPAT 120:301651

AB Surface-active imides [Rf(CH<sub>2</sub>)<sub>m</sub>Y<sub>1</sub>N-Y<sub>2</sub>R]<sub>z</sub> X<sub>z</sub><sup>+</sup> (Rf = C1-18 fluoroalkyl, C6-12 fluoroaryl, or C7-18 fluoroalkylaryl optionally contg. O in the chain; R = C1-30 alkyl, C6-12 aryl, or C7-30 alkylaryl optionally contg. O, N, or S in the chain; Y<sub>1</sub>, Y<sub>2</sub> = CO, SO<sub>2</sub>, OSO<sub>2</sub>, O<sub>2</sub>C; X = H, cation; m = 0-6; z = 1-7) are prepd. Perfluorobutanesulfonamide, octanesulfonyl fluoride, and LiOH were used in the prepn. of Me(CH<sub>2</sub>)<sub>7</sub>SO<sub>2</sub>N-(CF<sub>2</sub>)<sub>4</sub>F Li<sup>+</sup> which gave a 0.1% aq. soln. having surface tension .apprx.20 mN/m.

IT 155092-67-4P 155092-69-6P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of surface-active)

L17 ANSWER 38 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:213084 HCAPLUS

DOCUMENT NUMBER: 118:213084

TITLE: Preparation of 4-(biphenylmethyl)-1,2,4-triazol-3-ones as angiotensin II antagonists

INVENTOR(S): Chakravarty, Prasun K.; Greenlee, William J.; Kim, Dooseop; Mantlo, Nathan B.; Patchett, Arthur A.; Ashton, Wallace T.; Chang, Linda L.

PATENT ASSIGNEE(S): Merck and Co., Inc., USA

SOURCE: PCT Int. Appl., 201 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

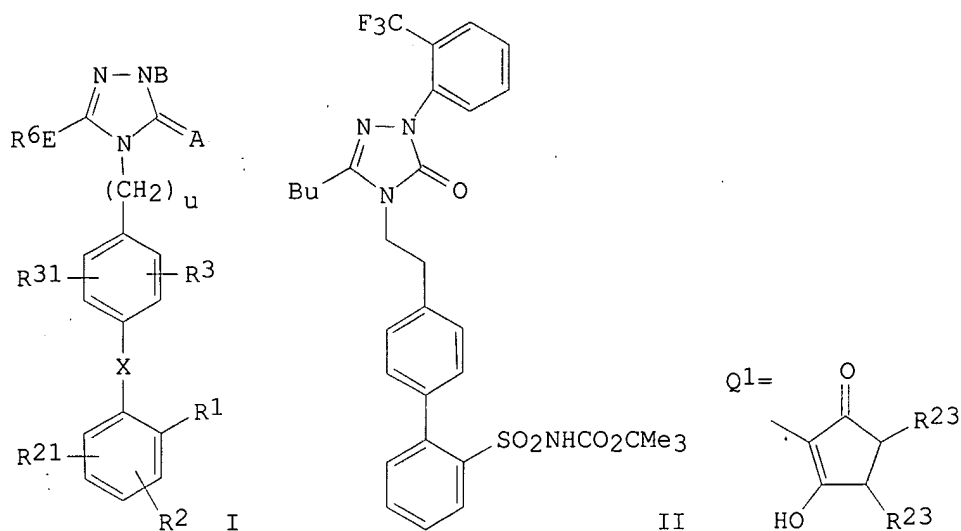
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9220662	A1	19921126	WO 1992-US3732	19920505
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2109524	AA	19921111	CA 1992-2109524	19920505
EP 586513	A1	19940316	EP 1992-912039	19920505
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06507642	T2	19940901	JP 1993-500066	19920505
JP 3290657	B2	20020610		
PRIORITY APPLN. INFO.:			US 1991-698505	A 19910510
			US 1992-875038	A 19920501
			WO 1992-US3732	W 19920505

OTHER SOURCE(S): MARPAT 118:213084

GI





AB Title compds. [I; R1 = SO<sub>2</sub>NR<sub>2</sub>3OR<sub>2</sub>3, SO<sub>2</sub>NHSO<sub>2</sub>R<sub>2</sub>2, SO<sub>2</sub>NHP(O)(R<sub>2</sub>4)<sub>2</sub>, SO<sub>2</sub>NHCN, SO<sub>2</sub>NHCO<sub>2</sub>R<sub>2</sub>2, NHSO<sub>2</sub>NHSO<sub>2</sub>R<sub>2</sub>2, Q1, NHSO<sub>2</sub>R<sub>2</sub>2, etc.; R2, R21 = H, halo, NO<sub>2</sub>, amino, aminosulfonyl, CF<sub>3</sub>, (substituted) alkyl; R3 = H, halo, alkyl, alkoxy, alkoxyalkyl; R31 = H, halo, NO<sub>2</sub>, alkyl, alkylcarbonyloxy, cycloalkyl, alkoxy, sulfonylamino, hydroxyalkyl, arylalkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, (di)(alkyl)amino, CF<sub>3</sub>, aminosulfonyl, (substituted) aryl; R1R21, R3R31 = atoms to form Ph rings; R6 = (substituted) alkyl, Ph, heteroaryl, (poly)fluoroalkyl, cycloalkyl, cycloalkylalkyl; A = O, S, imino; B = H, (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, Ph, biphenyl, naphthyl, etc.; E = bond, CH(OH), O(CH<sub>2</sub>)<sub>s</sub>, CO, S(O)x(CH<sub>2</sub>)<sub>s</sub>, NR<sub>1</sub>3(CH<sub>2</sub>)<sub>s</sub>; x = 0-2; s = 0-5; X = bond, CO, O, S, NR<sub>1</sub>3, NCO, OCH<sub>2</sub>, SCH<sub>2</sub>, CH:CH, CH:CF, cyclopropylidene, etc.; u = 1, 2; R13 = H, alkanoyl, alkyl, allyl, cycloalkyl, Ph, PhCH<sub>2</sub>; R22 = (substituted) Ph, alkyl, heteroaryl, cycloalkyl; R23 = H, (substituted) aryl, alkyl; R24 = (substituted) aryl, alkyl, OH, alkoxy, etc.], were prepd. Thus, title compd. III was prepd. starting from 2-F3CC6H4NHNH<sub>2</sub> and Et N-carboethoxyvalerimide. Dosage formulations were prepd. contg. II. Representative I bound to rat brain membrane angiotensin II receptors with IC<sub>50</sub> < 50 nM.

IT 146948-82-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of, as angiotensin II antagonist)

L17 ANSWER 39 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1992:59392 HCAPLUS

DOCUMENT NUMBER: 116:59392

TITLE: Preparation of pyrimidines, pyrimidinones and pyridopyrimidines as CNS and cardiovascular agents  
INVENTOR(S): Allen, Eric E.; Greenlee, William J.; MacCoss, Malcolm; Patchett, Arthur A.

PATENT ASSIGNEE(S): Merck and Co., Inc., USA

SOURCE: PCT Int. Appl., 139 pp.

CODEN: PIXXD2

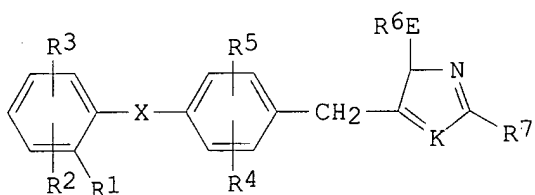
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9115209	A1	19911017	WO 1991-US1951	19910327
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2079344	AA	19911001	CA 1991-2079344	19910327
US 5166206	A	19921124	US 1991-676158	19910327
EP 522038	A1	19930113	EP 1991-907332	19910327
R: CH, DE, FR, GB, IT, LI, NL				
JP 05505609	T2	19930819	JP 1991-506652	19910327
US 5324729	A	19940628	US 1992-908143	19920731
PRIORITY APPLN. INFO.:			US 1990-501580	19900330
			US 1991-676158	19910327
			WO 1991-US1951	19910327
OTHER SOURCE(S):		MARPAT 116:59392		
GI				



I

AB Title compds. [I; K = NR8C(:M), N:CR9; M = O, imino; R1 = CO2H, alkoxy, carbonyl, SO3H, NHSO2CF3, CONHOH, cyano, (substituted) triazolyl, tetrazolyl, etc.; R2, R3 = H, halo, NO2, amino(sulfonyl), CF3, alkyl, alkoxy; R4 = H, Cl, Br, iodo, F, alkyl, alkoxy(alkyl); R5 = H, halo, NO2, alkanoyloxy, alkoxy, (cyclo)alkyl, (sulfonyl)amino, alkylthio, alkylsulfonyl, alkylsulfinyl, CF3, aminosulfonyl, aryl, furyl, etc.; R6 = (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, polyfluoroalkyl; R7 = H, OH, SH, (hetero)aryl, halo, CO2H, amino(sulfonyl), (substituted) alkyl, cycloalkyl, CF3, etc.; E = bond, aminoalkylene, O, CO, CH(OH), sulfonylalkylene, etc.; X = bond, CO, O, S, (carbonyl)imino, OCH2, SCH2, sulfonylimino, CF:CF, CH:CF, etc.; R8 = (hetero)aryl, (substituted) alkyl, alkylaryl; R1R8 = atoms to form a (substituted) pyridine ring; R9 = OH, (acyl)amino, halo, CO2H, sulfonylaminocarbonyl, cyano, tetrazolyl, etc.], were prepd. Thus, Et 3-oxoheptanoate (prepn. given) was condensed with .alpha.-bromo-4-iodotoluene in Me2SO contg. NaH to give 29% Et 2-[(4-iodophenyl)methyl]-3-oxoheptanoate. The latter was cyclocondensed with acetamidine hydrochloride and the product converted in 3 steps to 6-butyl-4-cyano-2-methyl-5-[(4-iodophenyl)methyl]pyrimidine. This was converted in 3 steps to 6-butyl-4-carboxy-2-methyl-5-[(2'-(tetrazol-5-yl)biphen-4-yl)methyl]pyrimidine. Capsules were prepd. contg. the latter. Several I had IC50 of <50 .mu.M for antagonizing angiotensin II.

IT 138405-37-5P 138405-48-8P 138405-59-1P  
 138405-70-6P 138405-81-9P 138405-92-2P  
 138406-02-7P 138442-77-0P 138444-25-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as CMS and cardiovascular agent)

L17 ANSWER 40 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1990:531568 HCAPLUS  
 DOCUMENT NUMBER: 113:131568  
 TITLE: Method for the synthesis of sulfonylimidides useful in electric conductors  
 INVENTOR(S): Armand, Michel  
 PATENT ASSIGNEE(S): Societe Nationale Elf Aquitaine (SNEA), Fr.;  
 Hydro-Quebec

SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 364340	A1	19900418	EP 1989-402744	19891004
EP 364340	B1	19920520		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
FR 2637284	A1	19900406	FR 1988-13005	19881005
FR 2637284	B1	19910705		
CA 2000142	AA	19900405	CA 1989-2000142	19891004
WO 9003968	A1	19900419	WO 1989-FR512	19891004
W: JP, US				
JP 03501860	T2	19910425	JP 1989-510800	19891004
AT 76400	E	19920615	AT 1989-402744	19891004
ES 2042038	T3	19931201	ES 1989-402744	19891004
US 5256821	A	19931026	US 1993-587	19930105
PRIORITY APPLN. INFO.:			FR 1988-13005	19881005
			EP 1989-402744	19891004
			WO 1989-FR512	19891004
			US 1990-460138	19900601
			US 1992-830749	19920207

OTHER SOURCE(S): MARPAT 113:131568

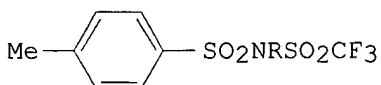
AB Title salts [(RSO<sub>2</sub>)<sub>2</sub>N]yM [I; M = metal, N(R<sub>1</sub>)<sub>4</sub>; R = C<sub>1</sub>-2 org. radical; R<sub>1</sub> = H, C<sub>1</sub>-8 hydrocarbyl; y = valence of M] are prep'd. by reaction of (1) a silazane [(R<sub>2</sub>)<sub>3</sub>Si]<sub>2</sub>N]yM (R<sub>2</sub> = C<sub>1</sub>-4 alkyl) or an assocn. of a silazane [(R<sub>2</sub>)<sub>3</sub>Si]<sub>2</sub>NA [A = H, Si(R<sub>2</sub>)<sub>3</sub>] and a fluoride salt MlFz (Ml selected from M groups; z = valence of Ml), with (2) .gtoreq. 1 sulfonyl fluoride RSO<sub>2</sub>F or assocn. of a sulfonyl chloride RSO<sub>2</sub>Cl and MlFz. I (R = perfluoroalkyl, M = esp. Li) are useful in assocn. with polyethers for prepn. of elec. conductive solid solns. for all-solid, thin-film, primary and secondary batteries. Thus, slow addn. of 30.4 g CF<sub>3</sub>SO<sub>2</sub>F to 100 mL 1M (Me<sub>3</sub>Si)<sub>2</sub>NLi in THF at -18.degree., followed by stirring, evapn. and washing with CH<sub>2</sub>Cl<sub>2</sub>, gave 26 g (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>NLi (II). A soln. of 2.9 g II and 4.4 g ethylene oxide polymer in MeCN was evapd. to give an amorphous elastic film of 220 .mu.m thickness and ionic cond. 2 .times. 10<sup>5</sup> .OMEGA.<sup>-1</sup> cm<sup>-1</sup>. Eleven addnl. syntheses are described.

IT 129135-88-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, for use in elec. conductors)

L17 ANSWER 41 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1980:215009 HCAPLUS  
 DOCUMENT NUMBER: 92:215009  
 TITLE: Method for transfer of labeled methyl groups  
 AUTHOR(S): Townsend, Craig A.; Theis, Alan B.  
 CORPORATE SOURCE: Dep. Chem., Johns Hopkins Univ., Baltimore, MD, 21218, USA  
 SOURCE: Journal of Organic Chemistry (1980), 45(9), 1697-9  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



I

AB The sulfonimides I (R = Me, PhCH<sub>2</sub>) were prep'd. by sequential reaction of RNH<sub>2</sub> with 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl and (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>O. Carbanions of active methylene compds. are readily methylated or benzylated by I. The ready availability of labeled MeNH<sub>2</sub> from Schmidt degrades. allows synthesis of labeled I for use in bioorg. tracer studies.

IT **73062-44-9P 73062-45-0P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and alkylation of carbanions by)

L17 ANSWER 42 OF 42 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1975:155644 HCAPLUS

DOCUMENT NUMBER: 82:155644

TITLE: Stable thallium(I) derivatives of N-alkylarylsulfonamides as intermediates in the preparation of N-alkyl-N-triflyl(or tresyl)arylsulfonimides

AUTHOR(S): Pan, Hsi-Lung; Fletcher, T. Lloyd

CORPORATE SOURCE: Pac. Northwest Res. Found., Seattle, WA, USA

SOURCE: Synthesis (1975), (1), 39-40  
CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Stirring RNHSO<sub>2</sub>Ar (R = Me, Et, hexyl; Ar = p-BrC<sub>6</sub>H<sub>4</sub>, p-MeC<sub>6</sub>H<sub>4</sub>) with TlOEt in C<sub>6</sub>H<sub>6</sub> under N for 1 hr gave 84-100% RN(Tl)SO<sub>2</sub>Ar which on treatment with tresyl chloride (F<sub>3</sub>CCCH<sub>2</sub>SO<sub>2</sub>Cl) or triflic anhydride [(F<sub>3</sub>CSO<sub>2</sub>)<sub>2</sub>O] in C<sub>6</sub>H<sub>6</sub> under N for several hr and reflux for 1-3 hr gave 44-80% RN(SO<sub>2</sub>Ar)SO<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>CF<sub>3</sub> (R = Me, Et; Ar = p-BrC<sub>6</sub>H<sub>4</sub>, p-MeC<sub>6</sub>H<sub>4</sub>; n = 0, 1).

IT **56059-60-0P 56059-61-1P 56059-62-2P**

**56059-63-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:07:24 ON 24 SEP 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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STRUCTURE FILE UPDATES: 23 SEP 2003 HIGHEST RN 591719-82-3

DICTIONARY FILE UPDATES: 23 SEP 2003 HIGHEST RN 591719-82-3

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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5	RN	503444-72-2	REGISTRY
6	RN	485394-13-6	REGISTRY
7	RN	485394-00-1	REGISTRY
8	RN	485393-98-4	REGISTRY
9	RN	485393-96-2	REGISTRY
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108	RN	56059-63-3	REGISTRY
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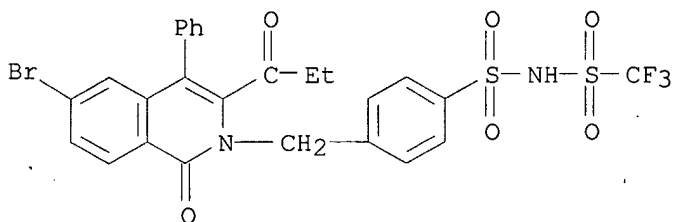
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L16 ANSWER 1 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 583837-34-7 REGISTRY

CN Benzenesulfonamide, 4-[[6-bromo-1-oxo-3-(1-oxopropyl)-4-phenyl-2(1H)-isoquinolinyl]methyl]-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C26 H20 Br F3 N2 O6 S2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER

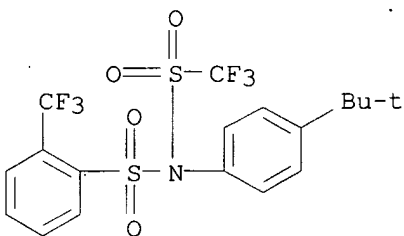


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:197386

L16 ANSWER 2 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 537031-87-1 REGISTRY  
 CN Benzenesulfonamide, N-[4-(1,1-dimethylethyl)phenyl]-2-(trifluoromethyl)-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C18 H17 F6 N O4 S2  
 SR CA  
 LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

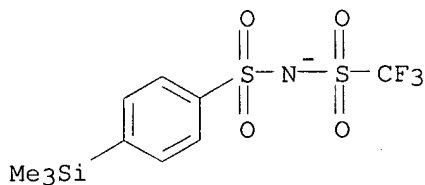
REFERENCE 1: 139:28625

L16 ANSWER 3 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 503444-79-9 REGISTRY  
 CN Pyridinium, 1-ethyl-, salt with N-[(trifluoromethyl)sulfonyl]-4-(trimethylsilyl)benzenesulfonamide (1:1) (9CI) (CA INDEX NAME)  
 MF C10 H13 F3 N O4 S2 Si . C7 H10 N  
 SR CA  
 LC STN Files: CA, CAPLUS

CM 1

CRN 503444-72-2

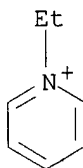
CMF C10 H13 F3 N O4 S2 Si



CM 2

CRN 15302-96-2

CMF C7 H10 N



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:274059

L16 ANSWER 6 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 485394-13-6 REGISTRY .

CN 1,2,4,5-Benzenetetracarboxylic acid, 1,5-diethyl ester, polymer with  
 1,4-benzenediamine, 2,5-diamino-N-[(nonafluorobutyl)sulfonyl]benzenesulfon  
 amide monopotassium salt and tris(4-chlorophenyl)phosphine (9CI) (CA  
 INDEX NAME)

MF (C18 H12 Cl3 P . C14 H14 O8 . C10 H8 F9 N3 O4 S2 . C6 H8 N2 . K)x

CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyamide, Polyamide formed,  
 Polyester, Polyester formed, Polyimide, Polyimide formed

SR CA

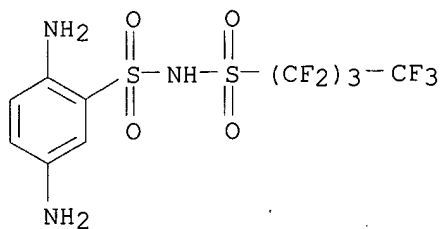
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 485393-88-2

CMF C10 H8 F9 N3 O4 S2 . K

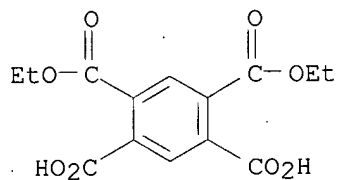




● K

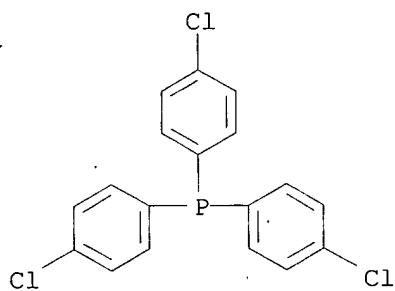
CM 2

CRN 6862-68-6  
CMF C14 H14 O8



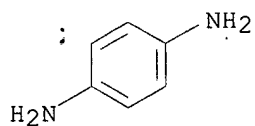
CM 3

CRN 1159-54-2  
CMF C18 H12 Cl3 P



CM 4

CRN 106-50-3  
CMF C6 H8 N2



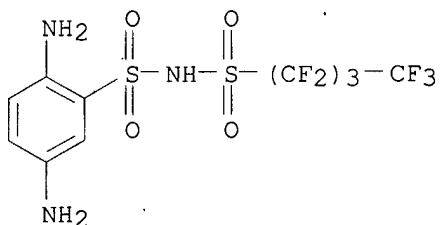
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:107174

L16 ANSWER 8 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 485393-98-4 REGISTRY  
CN Benzenesulfonamide, 2,5-diamino-N-[(nonafluorobutyl)sulfonyl]-,  
monopotassium salt, polymer with 1,4-benzenediamine and  
1,4-dichlorobenzene (9CI) (CA INDEX NAME)  
MF (C10 H8 F9 N3 O4 S2 . C6 H8 N2 . C6 H4 Cl2 . K)x  
CI PMS  
PCT Polyamine, Polyamine formed  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

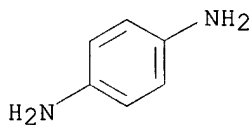
CRN 485393-88-2  
CMF C10 H8 F9 N3 O4 S2 . K



● K

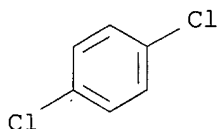
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CRN 106-50-3  
CMF C6 H8 N2



CM 3

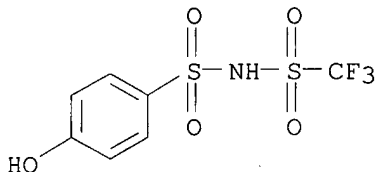
CRN 106-46-7  
CMF C6 H4 Cl2



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:107174

L16 ANSWER 12 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 457101-96-1 REGISTRY  
CN Benzenesulfonamide, 4-hydroxy-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C7 H6 F3 N O5 S2  
CI COM  
SR CA  
LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:217352

L16 ANSWER 17 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 452977-56-9 REGISTRY  
CN 1H-Imidazolium, 1-ethyl-3-(oxiranylmethyl)-, salt with 4-(trans-4-cyanocyclohexyl)-N-[(trifluoromethyl)sulfonyl]benzenesulfonamide (1:1), polymer with oxirane (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF (C14 H14 F3 N2 O4 S2 . C8 H13 N2 O . C2 H4 O)x  
CI PMS  
PCT Polyether, Polyether formed, Polyether  
SR CA  
LC STN Files: CA, CAPLUS

CM 1

CRN 75-21-8  
CMF C2 H4 O



CM 2

CRN 452977-55-8

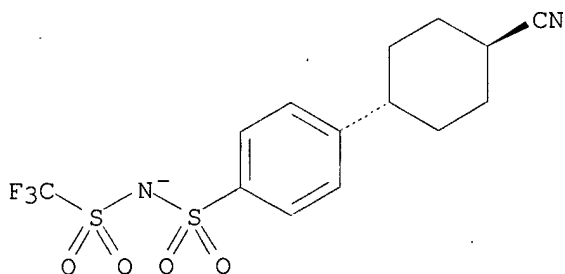
CMF C14 H14 F3 N2 O4 S2 . C8 H13 N2 O

CM 3

CRN 452977-54-7

CMF C14 H14 F3 N2 O4 S2

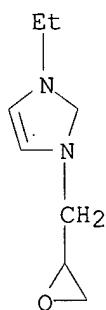
Relative stereochemistry.



CM 4

CRN 452977-53-6

CMF C8 H13 N2 O



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:203955

L16 ANSWER 20 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 422555-91-7 REGISTRY

CN 1H-Imidazolium, 1-[2-(2-ethoxyethoxy)ethyl]-3-methyl-, salt with  
4'-(decyloxy)-N-[(trifluoromethyl)sulfonyl][1,1'-biphenyl]-4-sulfonamide  
(1:1) (9CI) (CA INDEX NAME)

MF C23 H29 F3 N O5 S2 . C10 H19 N2 O2

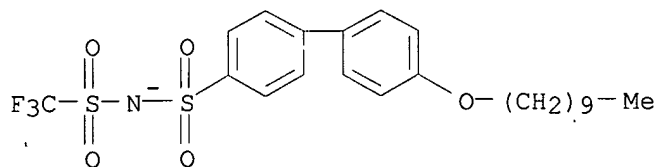
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

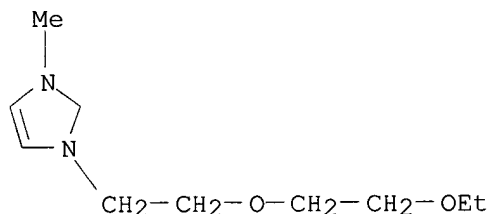
CRN 422555-90-6

CMF C23 H29 F3 N O5 S2



CM 2

CRN 359399-49-8  
CMF C10 H19 N2 O2

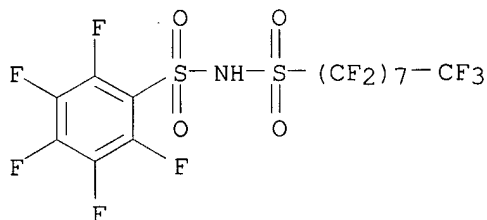


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:372231

L16 ANSWER 23 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 400608-37-9 REGISTRY  
CN Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-[(heptadecafluorooctyl)sulfonyl]- (9CI) (CA INDEX NAME)  
MF C14 H F22 N O4 S2  
SR CA  
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



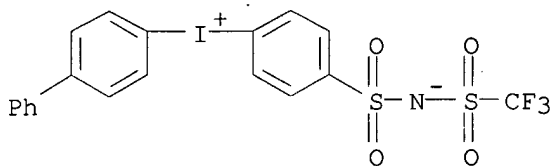
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:183967

L16 ANSWER 25 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 396733-94-1 REGISTRY  
CN Iodonium, [1,1'-biphenyl]-4-yl[4-[[[(trifluoromethyl)sulfonyl]amino]sulfonyl]

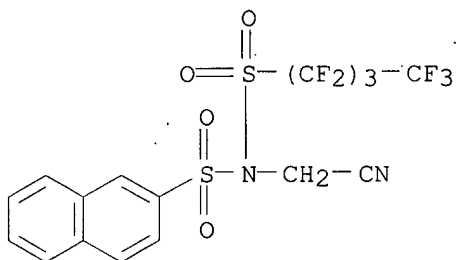
yl]phenyl]-, inner salt (9CI) (CA INDEX NAME)  
 MF C19 H13 F3 I N O4 S2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

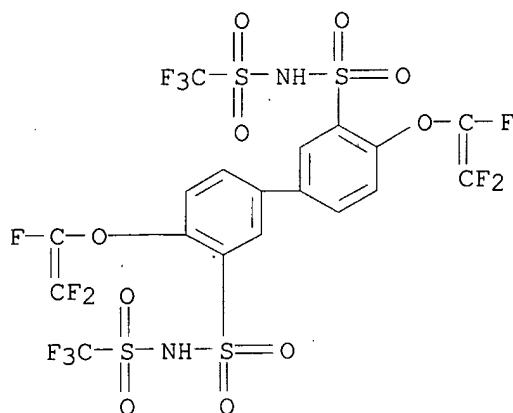
REFERENCE 1: 136:175464

L16 ANSWER 31 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 393122-20-8 REGISTRY  
 CN 2-Naphthalenesulfonamide, N-(cyanomethyl)-N-[(nonafluorobutyl)sulfonyl]-  
 (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C16 H9 F9 N2 O4 S2  
 SR Chemical Library  
 LC STN Files: CHEMCATS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L16 ANSWER 32 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 352008-63-0 REGISTRY  
 CN [1,1'-Biphenyl]-3,3'-disulfonamide, 4,4'-bis[(trifluoroethenyl)oxy]-N,N'-  
 bis[(trifluoromethyl)sulfonyl]-, disodium salt (9CI) (CA INDEX NAME)  
 MF C18 H8 F12 N2 O10 S4 . 2 Na  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

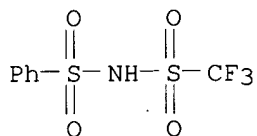


●2 Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 135:137825

L16 ANSWER 34 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 342646-21-3 REGISTRY  
CN Benzenesulfonamide, N-[(trifluoromethyl)sulfonyl]-, sodium salt (9CI) (CA INDEX NAME)  
MF C7 H6 F3 N O4 S2 . Na  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL  
CRN (174788-87-5)



Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

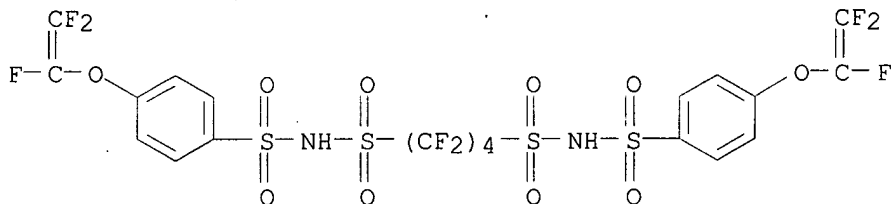
REFERENCE 1: 135:21210

L16 ANSWER 35 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 296239-80-0 REGISTRY  
CN 1,4-Butanedisulfonamide, 1,1,2,2,3,3,4,4-octafluoro-N,N'-bis[[4-[(trifluoroethenyl)oxy]phenyl]sulfonyl]-, polymer with 4,4'-bis[(trifluoroethenyl)oxy]-1,1'-biphenyl (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1,1'-Biphenyl, 4,4'-bis[(trifluoroethenyl)oxy]-, polymer with 1,1,2,2,3,3,4,4-octafluoro-N,N'-bis[[4-[(trifluoroethenyl)oxy]phenyl]sulfonyl]-1,4-butanedisulfonamide (9CI)  
MF (C20 H10 F14 N2 O10 S4 . C16 H8 F6 O2)x

CI PMS  
 PCT Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS

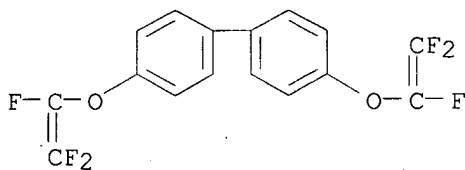
CM 1

CRN 296239-79-7  
 CMF C20 H10 F14 N2 O10 S4



CM 2

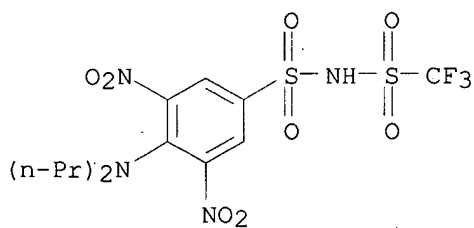
CRN 134130-19-1  
 CMF C16 H8 F6 O2



1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:253080

L16 ANSWER 37 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 262429-95-8 REGISTRY  
 CN Benzenesulfonamide, 4-(dipropylamino)-3,5-dinitro-N-  
 [(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C13 H17 F3 N4 O8 S2  
 SR CA  
 LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*



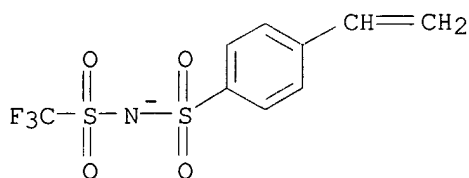
1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:246369

L16 ANSWER 39 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 261737-09-1 REGISTRY  
 CN 1H-Imidazolium, 1-ethyl-3-methyl-, salt with 4-ethenyl-N-  
 [(trifluoromethyl)sulfonyl]benzenesulfonamide (1:1), homopolymer (9CI)  
 (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Benzenesulfonamide, 4-ethenyl-N-[(trifluoromethyl)sulfonyl]-, ion(1-),  
 1-ethyl-3-methyl-1H-imidazolium, homopolymer (9CI)  
 MF (C9 H7 F3 N O4 S2 . C6 H11 N2)x  
 CI PMS  
 PCT Polyether, Polystyrene  
 SR CA  
 LC STN Files: CA, CAPLUS

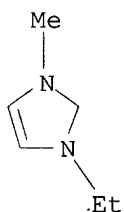
CM 1

CRN 261737-08-0  
 CMF C9 H7 F3 N O4 S2



CM 2

CRN 65039-03-4  
 CMF C6 H11 N2

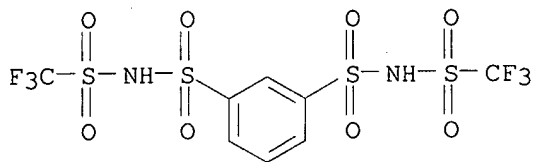


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:239412

L16 ANSWER 41 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 244250-89-3 REGISTRY  
 CN 1,3-Benzenedisulfonamide, N,N'-bis[(trifluoromethyl)sulfonyl]-, dilithium  
 salt (9CI) (CA INDEX NAME)  
 MF C8 H6 F6 N2 O8 S4 . 2 Li  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



● 2 Li

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:245556

L16 ANSWER 44 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 235437-48-6 REGISTRY

CN Benzenesulfonamide, 4-(trifluoroethenyl)-N-[[4-(trifluoroethenyl)phenyl]sulfonyl]-, lithium salt, polymer with 4-(trifluoroethenyl)-N-[(trifluoromethyl)sulfonyl]benzenesulfonamide potassium salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenesulfonamide, 4-(trifluoroethenyl)-N-[(trifluoromethyl)sulfonyl]-, potassium salt, polymer with 4-(trifluoroethenyl)-N-[[4-(trifluoroethenyl)phenyl]sulfonyl]benzenesulfonamide lithium salt (9CI)

MF (C16 H9 F6 N O4 S2 . C9 H5 F6 N O4 S2 . K . Li)x

CI PMS

PCT Polystyrene, Polyvinyl

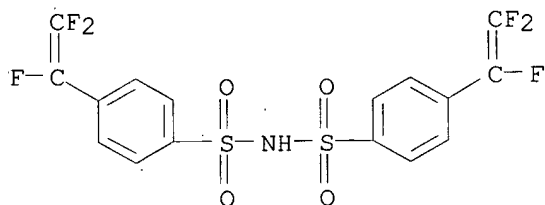
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 235437-46-4

CMF C16 H9 F6 N O4 S2 . Li

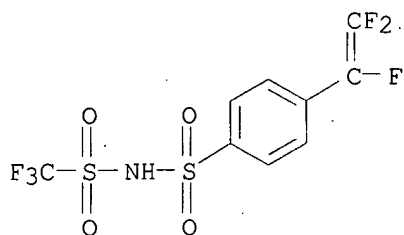


● Li

CM 2

CRN 220284-51-5

CMF C9 H5 F6 N O4 S2 . K



● K

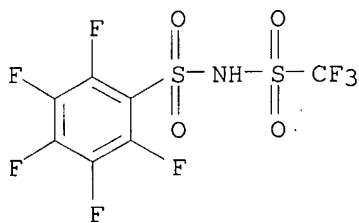
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:145247

L16 ANSWER 45 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 233278-24-5 REGISTRY  
CN Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-[(trifluoromethyl)sulfonyl]-,  
compd. with pyridine (1:1) (9CI) (CA INDEX NAME)  
MF C7 H F8 N O4 S2 . C5 H5 N  
SR CA  
LC STN Files: CA, CAPLUS

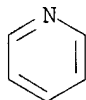
CM 1

CRN 200728-68-3  
CMF C7 H F8 N O4 S2



CM 2

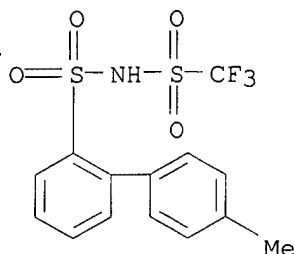
CRN 110-86-1  
CMF C5 H5 N



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:115999

L16 ANSWER 46 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 220503-13-9 REGISTRY  
 CN [1,1'-Biphenyl]-2-sulfonamide, 4'-methyl-N-[(trifluoromethyl)sulfonyl]-  
 (9CI) (CA INDEX NAME)  
 MF C14 H12 F3 N O4 S2  
 SR CA  
 LC STN Files: CA, CAPLUS

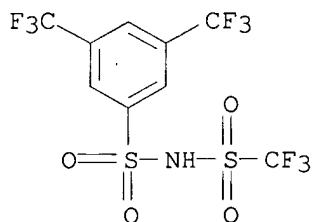


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:182416

L16 ANSWER 47 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 220431-13-0 REGISTRY  
 CN Benzenesulfonamide, 3,5-bis(trifluoromethyl)-N-[(trifluoromethyl)sulfonyl]-  
 , potassium salt (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 3,5-Bis(trifluoromethyl)-N-[(trifluoromethyl)sulfonyl]benzenesulfonamide  
 potassium salt  
 MF C9 H4 F9 N O4 S2 . K  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



● K

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:168015

L16 ANSWER 48 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 220284-52-6 REGISTRY  
 CN Ethanaminium, N,N,N-triethyl-, salt with 4-(trifluoroethenyl)-N-[[4-(trifluoroethenyl)phenyl]sulfonyl]benzenesulfonamide (1:1), polymer with

4-(trifluoroethenyl)-N-[(trifluoromethyl)sulfonyl]benzenesulfonamide  
potassium salt (9CI) (CA INDEX NAME)

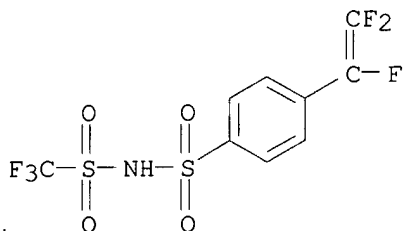
OTHER CA INDEX NAMES:

CN Benzenesulfonamide, 4-(trifluoroethenyl)-N-[(trifluoromethyl)sulfonyl]-,  
potassium salt, polymer with N,N,N-triethylethanaminium salt with  
4-(trifluoroethenyl)-N-[[4-(1,2,2-trifluoroethenyl)phenyl]sulfonyl]benzene  
sulfonamide (1:1) (9CI)  
CN Benzenesulfonamide, 4-(trifluoroethenyl)-N-[[4-  
(trifluoroethenyl)phenyl]sulfonyl]-, ion(1-), N,N,N-triethylethanaminium,  
polymer with 4-(trifluoroethenyl)-N-[(trifluoromethyl)sulfonyl]benzenesulf  
onamide potassium salt (9CI)  
MF (C16 H8 F6 N O4 S2 . C9 H5 F6 N O4 S2 . C8 H20 N . K)x  
CI PMS  
PCT Polyether, Polystyrene, Polyvinyl  
SR CA  
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

CM 1

CRN 220284-51-5

CMF C9 H5 F6 N O4 S2 . K



● K

CM 2

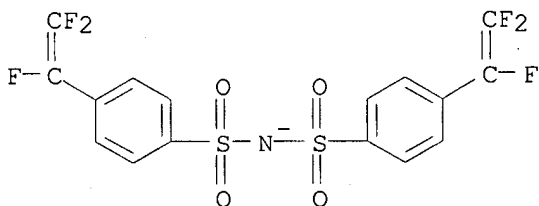
CRN 220284-50-4

CMF C16 H8 F6 N O4 S2 . C8 H20 N

CM 3

CRN 220284-49-1

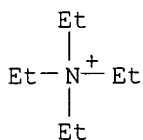
CMF C16 H8 F6 N O4 S2



CM 4

CRN 66-40-0

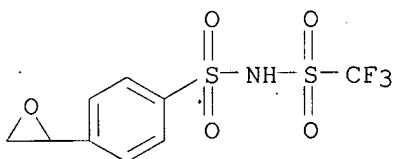
CMF C8 H20 N



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:154396

L16 ANSWER 50 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 215815-28-4 REGISTRY  
CN Benzenesulfonamide, 4-oxiranyl-N-[(trifluoromethyl)sulfonyl]-, lithium  
salt (9CI) (CA INDEX NAME)  
DR 244250-85-9  
MF C9 H8 F3 N O5 S2 . Li  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL



● Li

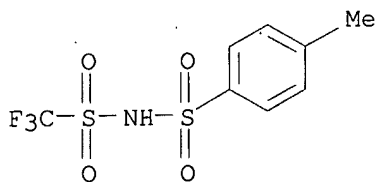
3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:94549

REFERENCE 2: 131:245556

REFERENCE 3: 130:14981

L16 ANSWER 58 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 215395-07-6 REGISTRY  
CN Benzenesulfonamide, 4-methyl-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA  
INDEX NAME)  
FS 3D CONCORD.  
MF C8 H8 F3 N O4 S2  
CI COM  
SR CA  
LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 129:343244

L16 ANSWER 59 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 210227-81-9 REGISTRY

CN Benzenesulfonamide, 4-ethenyl-N-[(trifluoromethyl)sulfonyl]-, lithium salt, polymer with 2-propenenitrile (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Propenenitrile, polymer with 4-ethenyl-N-[(trifluoromethyl)sulfonyl]benzenesulfonamide lithium salt (9CI)

MF (C9 H8 F3 N O4 S2 . C3 H3 N . Li)x

CI PMS

PCT Polyacrylic, Polystyrene

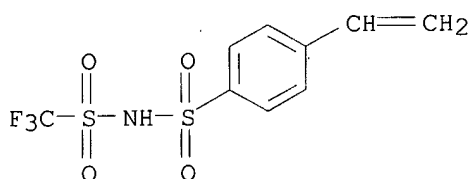
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 210226-98-5

CMF C9 H8 F3 N O4 S2 . Li

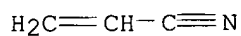


● Li

CM 2

CRN 107-13-1

CMF C3 H3 N

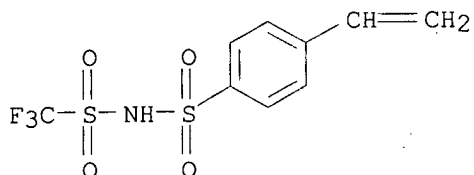


1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 129:122975

L16 ANSWER 75 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 210226-98-5 REGISTRY  
 CN Benzenesulfonamide, 4-ethenyl-N-[(trifluoromethyl)sulfonyl]-, lithium salt  
 (9CI) (CA INDEX NAME)  
 DR 244250-76-8  
 MF C9 H8 F3 N O4 S2 . Li  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL.



● Li

4 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

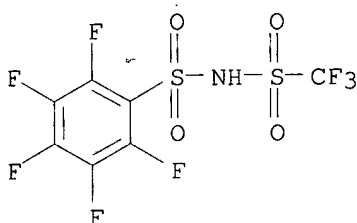
REFERENCE 1: 137:94549

REFERENCE 2: 131:245556

REFERENCE 3: 130:14981

REFERENCE 4: 129:122975

L16 ANSWER 77 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 201303-23-3 REGISTRY  
 CN Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-[(trifluoromethyl)sulfonyl]-,  
 lithium salt (9CI) (CA INDEX NAME)  
 MF C7 H F8 N O4 S2 . Li  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS  
 CRN (200728-68-3)



Li

1 REFERENCES IN FILE CA (1907 TO DATE)



## 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:115999

L16 ANSWER 78 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 200728-69-4 REGISTRY

CN Benzenesulfonyl fluoride, 2,3,5,6-tetrafluoro-4-  
 [[(trifluoromethyl)sulfonyl]amino]-, lithium salt, compd. with  
 2,3,4,5,6-pentafluoro-N-[(trifluoromethyl)sulfonyl]benzenesulfonamide  
 lithium salt (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-[(trifluoromethyl)sulfonyl]-,  
 lithium salt, compd. with 2,3,5,6-tetrafluoro-4-  
 [[(trifluoromethyl)sulfonyl]amino]benzenesulfonyl fluoride lithium salt  
 (1:1) (9CI)

MF C7 H F8 N O4 S2 . C7 H F8 N O4 S2 . 2 Li

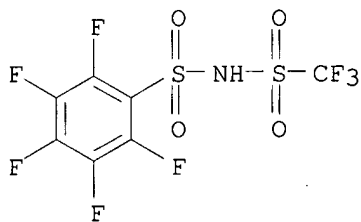
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 201303-23-3 (200728-68-3)

CMF C7 H F8 N O4 S2 . Li

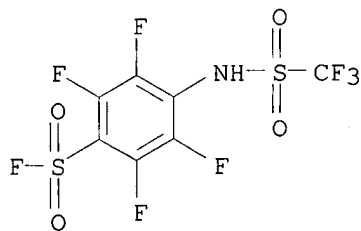


● Li

CM 2

CRN 201303-22-2 (200728-67-2)

CMF C7 H F8 N O4 S2 . Li



Li

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:61292

REFERENCE 2: 128:77533

L16 ANSWER 80 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 176719-72-5 REGISTRY

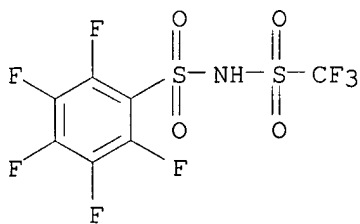
CN Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-[(trifluoromethyl)sulfonyl]-, sodium salt (9CI) (CA INDEX NAME)

MF C7 H F8 N O4 S2 . Na

SR CA

LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

CRN (200728-68-3)



● Na

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:342658

L16 ANSWER 81 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 174788-92-2 REGISTRY

CN Benzenesulfonamide, 4-nitro-N-[(trifluoromethyl)sulfonyl]-, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

MF C7 H5 F3 N2 O6 S2 . C5 H5 N

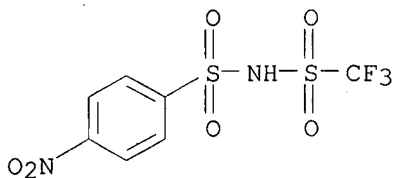
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 174788-91-1

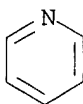
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CM 2

CRN 110-86-1

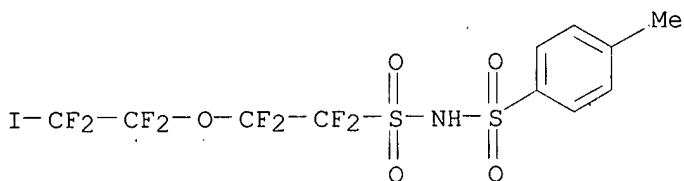
CMF C5 H5 N



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:231973

L16 ANSWER 87 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 172510-88-2 REGISTRY  
CN Benzenesulfonamide, 4-methyl-N-[[1,1,2,2-tetrafluoro-2-(1,1,2,2-tetrafluoro-2-iodoethoxy)ethyl]sulfonyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C11 H8 F8 I N O5 S2  
SR CA  
LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:86520

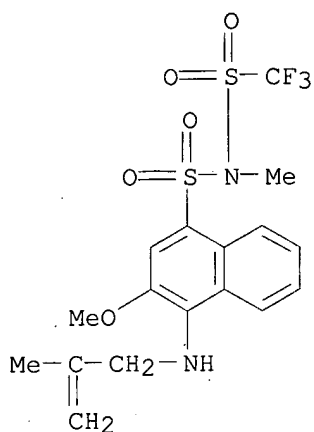
L16 ANSWER 88 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 163427-96-1 REGISTRY  
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with 3-methoxy-N-methyl-4-[(2-methyl-2-propenyl)amino]-N-[(trifluoromethyl)sulfonyl]-1-naphthalenesulfonamide (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Naphthalenesulfonamide, 3-methoxy-N-methyl-4-[(2-methyl-2-propenyl)amino]-N-[(trifluoromethyl)sulfonyl]-, polymer with oxiranylmethyl 2-methyl-2-propenoate (9CI)  
MF (C17 H19 F3 N2 O5 S2 . C7 H10 O3)x  
CI PMS  
PCT Polyacrylic, Polyvinyl  
SR CA  
LC STN Files: CA, CAPLUS

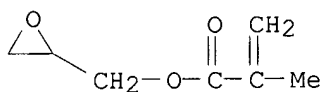
CM 1

CRN 163427-95-0  
CMF C17 H19 F3 N2 O5 S2



CM 2

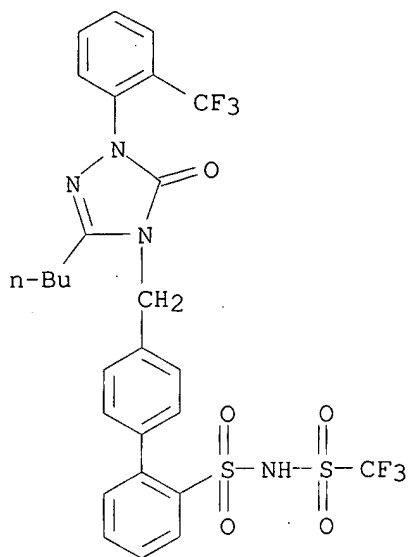
CRN 106-91-2  
CMF C7 H10 O3



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:326592

L16 ANSWER 90 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 159544-63-5 REGISTRY  
CN [1,1'-Biphenyl]-2-sulfonamide, 4'-[[3-butyl-1,5-dihydro-5-oxo-1-[2-(trifluoromethyl)phenyl]-4H-1,2,4-triazol-4-yl]methyl]-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
MF C27 H24 F6 N4 O5 S2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

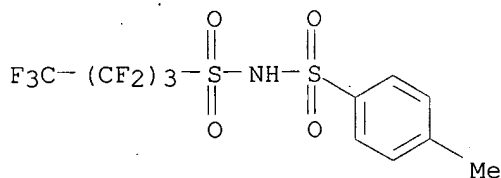
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:10037

L16 ANSWER 91 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 155092-69-6 REGISTRY  
CN Benzenesulfonamide, 4-methyl-N-[(nonafluorobutyl)sulfonyl]-, compd. with  
N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)  
MF C11 H8 F9 N O4 S2 . C6 H15 N  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

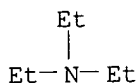
CM 1

CRN 155092-68-5  
CMF C11 H8 F9 N O4 S2



CM 2

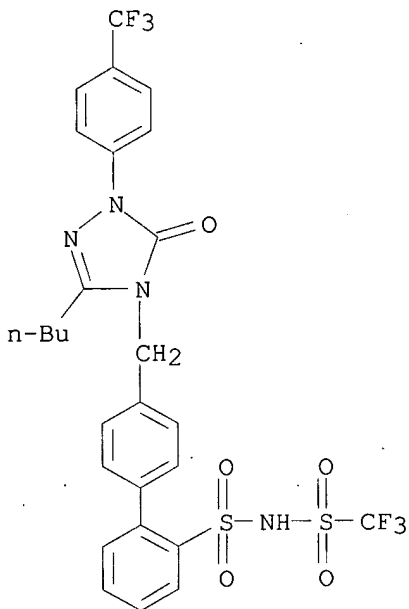
CRN 121-44-8  
CMF C6 H15 N



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:301651

L16 ANSWER 95 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 146948-82-5 REGISTRY  
CN [1,1'-Biphenyl]-2-sulfonamide, 4'-[[3-butyl-1,5-dihydro-5-oxo-1-[4-(trifluoromethyl)phenyl]-4H-1,2,4-triazol-4-yl]methyl]-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
MF C27 H24 F6 N4 O5 S2  
SR CA  
LC STN Files: CA, CAPLUS



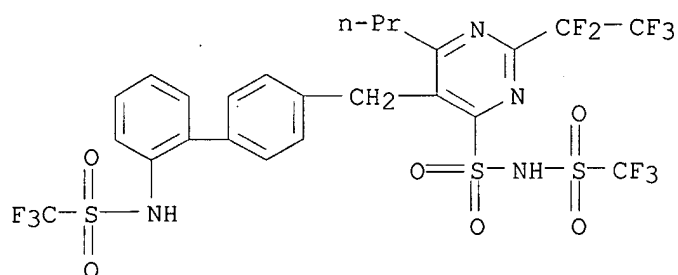
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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 118:213084

L16 ANSWER 96 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 138444-25-4 REGISTRY  
CN 4-Pyrimidinesulfonamide, 2-(pentafluoroethyl)-6-propyl-N-[(trifluoromethyl)sulfonyl]-5-[[2'-[[trifluoromethyl)sulfonyl]amino][1,1'-biphenyl]-4-yl]methyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C24 H19 F11 N4 O6 S3  
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

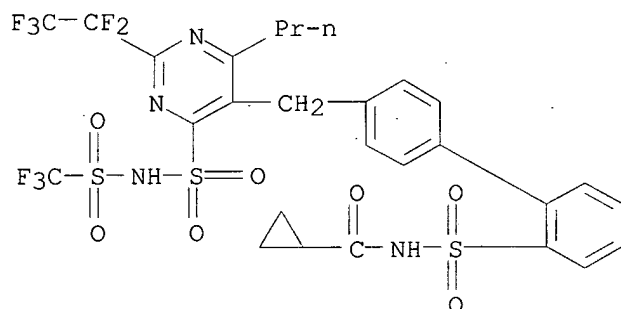


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:59392

L16 ANSWER 97 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 138442-77-0 REGISTRY  
 CN Cyclopropanecarboxamide, N-[[[4'-[[2-(pentafluoroethyl)-4-propyl-6-[[[(trifluoromethyl)sulfonyl]amino]sulfonyl]-5-pyrimidinyl]methyl][1,1'-biphenyl]-2-yl]sulfonyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C27 H24 F8 N4 O7 S3  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



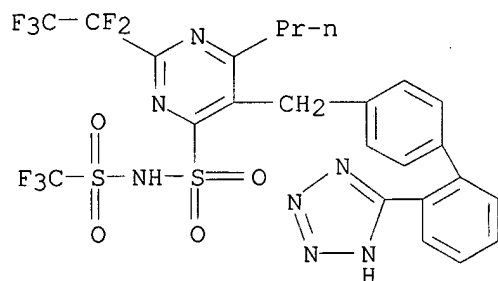
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:59392

L16 ANSWER 98 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 138406-02-7 REGISTRY  
 CN 4-Pyrimidinesulfonamide, 2-(pentafluoroethyl)-6-propyl-5-[[[2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl]methyl]-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C24 H19 F8 N7 O4 S2  
 SR CA

LC STN Files: CA, CAPLUS, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:59392

L16 ANSWER 99 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 138405-92-2 REGISTRY

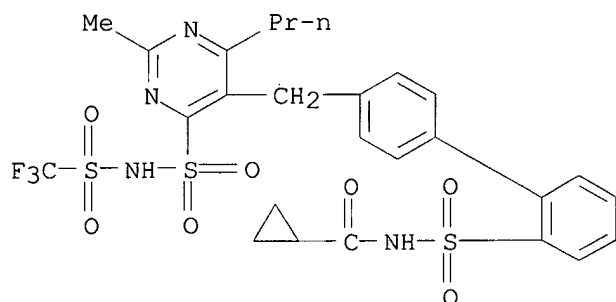
CN Cyclopropanecarboxamide, N-[[4'-[[2-methyl-4-propyl-6-  
[[[(trifluoromethyl)sulfonyl]amino]sulfonyl]-5-pyrimidinyl]methyl][1,1'-  
biphenyl]-2-yl]sulfonyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C26 H27 F3 N4 O7 S3

SR CA

LC STN Files: CA, CAPLUS, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:59392

L16 ANSWER 105 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN

RN 129135-88-2 REGISTRY

CN Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-[(nonafluorobutyl)sulfonyl]-,  
potassium salt (9CI) (CA INDEX NAME)

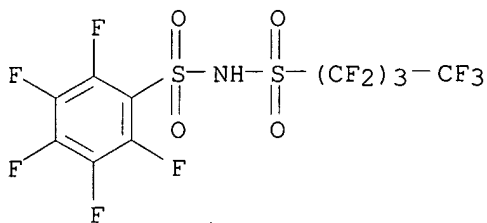
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SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CRN (400608-36-8)



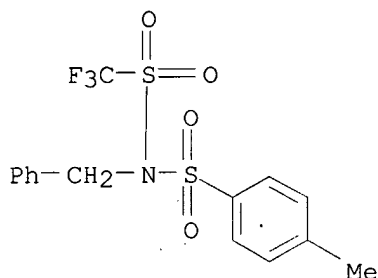


● K

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 113:131568

L16 ANSWER 106 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 73062-45-0 REGISTRY  
CN Benzenesulfonamide, 4-methyl-N-(phenylmethyl)-N-  
[(trifluoromethyl)sulfonyl]- (9CI). (CA INDEX NAME)  
FS 3D CONCORD  
MF C15 H14 F3 N O4 S2  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)

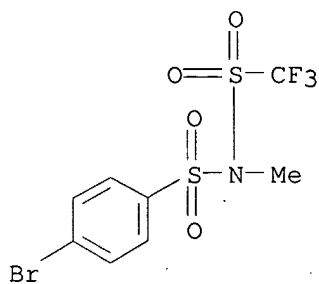


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 92:215009

L16 ANSWER 111 OF 111 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 56059-60-0 REGISTRY  
CN Benzenesulfonamide, 4-bromo-N-methyl-N-[(trifluoromethyl)sulfonyl]- (9CI)  
(CA INDEX NAME)  
FS 3D CONCORD  
MF C8 H7 Br F3 N O4 S2  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 82:155644

=> fil hcaplus  
 FILE 'HCAPLUS' ENTERED AT 10:11:22 ON 24 SEP 2003  
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 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 24 Sep 2003 VOL 139 ISS 13  
 FILE LAST UPDATED: 23 Sep 2003 (20030923/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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 L3 5778 SEA FILE=REGISTRY SSS FUL L1  
 L4 STR  
 L5 1150 SEA FILE=REGISTRY SUB=L3 SSS FUL L4  
 L10 25 SEA FILE=HCAPLUS ABB=ON PLU=ON ("HAMROCK STEVEN J"/AU OR  
 "HAMROCK STEVEN J"/IN OR "HAMROCK STEVEN JOSEPH"/AU OR  
 "HAMROCK STEVEN JOSEPH"/IN)  
 L14 STR  
 L15 STR  
 L16 111 SEA FILE=REGISTRY SUB=L5 SSS FUL L14 OR L15  
 L17 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L16  
 L20 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 NOT L17

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L20 ANSWER 1 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:335070 HCAPLUS  
 DOCUMENT NUMBER: 138:324134  
 TITLE: Zwitterionic imides for use in electrochemical devices  
 INVENTOR(S): Hamrock, Steven J.  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
 SOURCE: PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2003035609 A1 20030501 WO 2002-US24603 20020802

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003087151 A1 20030508 US 2001-41998 20011025

PRIORITY APPLN. INFO.: US 2001-41998 A 20011025

AB Zwitterionic imide compds. are provided according to the formula: R1-SO2-N--SO2-R2+, where R1 and R2+ are any suitable groups. Typically R1 is a highly fluorinated alkane and R2+ contains a quaternary ammonium group or a heteroatom. arom. group having a cationic nitrogen, such as: pyridiniumyl, pyridaziniumyl, pyrimidiniumyl, pyraziniumyl, imidazoliumyl, pyrazoliumyl, thiazoliumyl, oxazoliumyl, or triazoliumyl. Zwitterionic liqs. are provided, typically having m.ps. of less than 100.degree. and typically having a soly. in water of less than 5% by wt.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:763478 HCAPLUS

DOCUMENT NUMBER: 135:306284

TITLE: Membrane electrode assembly having annealed polymer electrolyte membrane for fuel cell

INVENTOR(S): Hamrock, Steven Joseph; Lewin, John Leonard; Mao, Shane Shanhong

PATENT ASSIGNEE(S): 3m Innovative Properties Company, USA

SOURCE: U.S. Pat. Appl. Publ., 4 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001031388	A1	20011018	US 2001-837771	20010418
WO 2001080336	A2	20011025	WO 2001-US12713	20010418
WO 2001080336	A3	20020321		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1275166 A2 20030115 EP 2001-927203 20010418

R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-197741P P 20000418

WO 2001-US12713 W 20010418

AB A membrane electrode assembly (MEA) comprises an annealed polymer electrolyte membrane (PEM). Addnl., the MEA may include annealed catalyst layers annealed in contact with the annealed PEM. Addnl., methods of

manuf. are provided. MEA's according to the present invention may be used in an electrochem. cell, such as a hydrogen fuel cell.

L20 ANSWER 3 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2001:526303 HCAPLUS  
 DOCUMENT NUMBER: 135:109718  
 TITLE: Battery electrolyte containing perfluoroalkanesulfonate salts  
 INVENTOR(S): **Hamrock, Steven J.**; Fanta, Alan D.; Lamanna, William M.; Johnson, Bryan J.; Boyd, Steven D.; Shimada, Hiroshi; Pham, Phat T.  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
 SOURCE: PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001052341	A1	20010719	WO 2000-US15149	20000601
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2000-480411 A 20000111

OTHER SOURCE(S): MARPAT 135:109718

AB Electrolyte compns. and electrochem. systems contg. such compns. are disclosed where the electrolyte includes in a matrix material a combination of a conductive imide or methide salt and a perfluoroalkanesulfonate additive salt. The compns. reduce high temp. capacity fade, aluminum current collector corrosion and improve safety while maintaining and improving cond., stability, and compatibility with other cell components.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2001:453131 HCAPLUS  
 DOCUMENT NUMBER: 135:62294  
 TITLE: Acid functional fluoropolymer membranes and method of manufacture  
 INVENTOR(S): **Hamrock, Steven J.**; Jing, Naiyong; Mao, Shane S.; Hardy, L. Charles  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001044314	A1	20010621	WO 2000-US32879	20001204
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, FI,				

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
 KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,  
 TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,  
 TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6423784 B1 20020723 US 1999-464337 19991215

EP 1242473 A1 20020925 EP 2000-982393 20001204

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2003517054 T2 20030520 JP 2001-544801 20001204

US 2003008191 A1 20030109 US 2002-195221 20020715

PRIORITY APPLN. INFO.:

US 1999-464337 A 19991215

WO 2000-US32879 W 20001204

AB Methods are provided to make acid functional fluoropolymers by: (a) dehydrofluorinating a starting fluoropolymer with a dehydrofluorinating agent to form an unsatd. fluoropolymer; (b) adding an acidifiable nucleophilic functionalizing agent to a double bond of the unsatd. fluoropolymer; and (c) acidifying the added acidifiable function. Acid functional fluoropolymers and ion conducting membranes thereof are also provided, including acid functional fluoropolymer having pendant groups according to the formula: -X-Ar-An, wherein X is selected from O, S or NR, where R is selected from H and C1-30 alkyl or aryl, which are optionally substituted, wherein Ar is a C6-30 arom. group, which is optionally substituted, wherein A is an acidic function or salt thereof, wherein n can be independently chosen to be 1, 2 or 3. The membranes are useful as ion conducting membranes in electrochem. cells. Thus, blending Fluorel FC 2145 (fluoropolymer) (I) dissolved in MEK (to .apprx.15%) with 1 M Li phenoxide (II) soln. in THF to a I/II wt. ratio of 68.7/31.3, adding Li2CO3 (2 equiv based on II), heating at reflux with stirring for 3-5 days, after sitting at room temp. overnight to allow the Li2CO3 to settle, filtering and working up gave a phenoxide-modified resin which was pressed between 2 plates at .gtoreq.100.degree. to give a film. Sulfonating the film with conc. H2SO4 and fuming H2SO4 gave an ion conducting membrane.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:911602 HCAPLUS

DOCUMENT NUMBER: 134:59135

TITLE: Improved polymer electrolyte membranes from mixed dispersions

INVENTOR(S): Hamrock, Steven J.; Ylitalo, David A.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000079629	A1	20001228	WO 2000-US12563	20000508
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,			

DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 US 6277512 B1 20010821 US 1999-336203 19990618  
 EP 1201001 A1 20020502 EP 2000-928921 20000508  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL  
 JP 2003502828 T2 20030121 JP 2001-505093 20000508  
 PRIORITY APPLN. INFO.: US 1999-336203 A 19990618  
 WO 2000-US12563 W 20000508

AB A polymer electrolyte membrane is provided comprising an intimate mixt. of an ionomeric polymer and a structural film-forming polymer. A method of making the polymer electrolyte membrane is also provided, comprising the step of coalescing at least one of an ionomeric polymer and a structural film-forming polymer in a mixt. of the two resulting from a mixed dispersion and optionally crosslinking one or both. The polymers used may be fluoropolymers and the ionomeric polymer may contain pendent sulfonic acid groups.

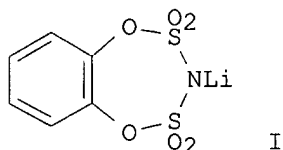
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2000:144855 HCAPLUS  
 DOCUMENT NUMBER: 132:194398  
 TITLE: Preparation of sulfonylimides as conductive salts for use in battery electrolytes.  
 INVENTOR(S): Fanta, Alan D.; Pham, Phat T.; **Hamrock, Steven J.**  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, USA  
 SOURCE: PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION: -

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000010969	A1	20000302	WO 1999-US1668	19990126
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 2001008736	A1	20010719	US 1998-139374	19980825
US 6350545	B2	20020226		
CA 2339627	AA	20000302	CA 1999-2339627	19990126
AU 9924723	A1	20000314	AU 1999-24723	19990126
EP 1107951	A1	20010620	EP 1999-904298	19990126
R:	DE, FR, GB			

PRIORITY APPLN. INFO.: US 1998-139374 A 19980825  
 WO 1999-US1668 W 19990126

OTHER SOURCE(S): MARPAT 132:194398  
 GI



AB  $N(SO_2XR_p)m(SO_2R_1)o \ 1/nMn^+$  [ $m = 1, 2$ ;  $m+o = 2$ ;  $X = O, N$ ;  $p = 1$  when  $X = O$ ,  $p = 2$  when  $X = N$ ;  $R$  = monovalent hydrocarbyl;  $RR$  = (heteroatom-interrupted) divalent hydrocarbyl, atoms to form 3-6 membered ring;  $R_1$  = hydrocarbyl, fluoroalkyl, fluorocycloalkyl, fluorocycloalkylfluoroalkyl, etc.;  $RR_1$  = (heteroatom-interrupted) ring;  $Mn^+$  = cation having valence  $n$ ; when  $m = 2$ ,  $Mn^+ = (R_2)_4N^+$ ;  $R_2$  = alkyl], were prepd. Thus, catechol in MeCN was treated with imidobis(sulfuryl chloride) in MeCN; the mixt. was cooled to 0.degree. followed by addn. of Et<sub>3</sub>N and stirring for 1 h at 0.degree. and 1 h at room temp. to give a red-brown oil which was treated with aq. LiOH to give title compd. (I). I at 0.8 M in ethylene carbonate/dimethyl carbonate showed cond. of 7.2 MS/cm.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:117277 HCAPLUS  
DOCUMENT NUMBER: 132:154406  
TITLE: Solid polymer electrolyte compositions  
INVENTOR(S): Garbe, James E.; Atanasoski, Radoslav; **Hamrock, Steven J.**; Ba, Le Dinh  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
SOURCE: PCT Int. Appl., 31 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008705	A1	20000217	WO 1999-US17744	19990805
W: CA, CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6316149	B1	20011113	US 1998-130241	19980806
PRIORITY APPLN. INFO.:		US 1998-130241 A 19980806		
AB An electrolyte compn. is featured that includes a solid, ionically conductive polymer, organically modified oxide particles (.ltorsim.1%) that include org. groups covalently bonded to the oxide particles, and an alkali metal salt. The electrolyte compn. is free of lithiated zeolite. The invention also features cells that incorporate the electrolyte compn.				
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L20 ANSWER 8 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:117272 HCAPLUS  
DOCUMENT NUMBER: 132:154405  
TITLE: Solid polymer electrolyte compositions and batteries that contain them  
INVENTOR(S): Garbe, James E.; Atanasoski, Radoslav; **Hamrock, Steven J.**; Ba, Le Dinh  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, USA  
SOURCE: PCT Int. Appl., 30 pp.



CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008696	A2	20000217	WO 1999-US17687	19990804
WO 2000008696	A3	20000615		
W: CA, CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6316149	B1	20011113	US 1998-130241	19980806
PRIORITY APPLN. INFO.:			US 1998-130241	A 19980806
AB An electrolyte compn. is featured that includes a solid, ionically conductive polymer, organically modified oxide particles that include org. groups covalently bonded to the oxide particles, and an alkali metal salt. The electrolyte compn. is free of lithiated zeolite. The invention also features cells that incorporate the electrolyte compn.				
L20 ANSWER 9 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN				
ACCESSION NUMBER:		1999:763940 HCAPLUS		
DOCUMENT NUMBER:		132:12923		
TITLE:		Crosslinked sulfonated PEEK polyelectrolyte membranes		
INVENTOR(S):		Mao, Shane S.; Hamrock, Steven J.; Ylitalo, David A.		
PATENT ASSIGNEE(S):		Minnesota Mining and Manufacturing Company, USA		
SOURCE:		PCT Int. Appl., 24 pp.		
		CODEN: PIXXD2		
DOCUMENT TYPE:		Patent		
LANGUAGE:		English		
FAMILY ACC. NUM. COUNT:		1		
PATENT INFORMATION:				

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9961141	A1	19991202	WO 1999-US1782	19990128
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6090895	A	20000718	US 1998-84073	19980522
CA 2331720	AA	19991202	CA 1999-2331720	19990128
AU 9925645	A1	19991213	AU 1999-25645	19990128
EP 1077758	A1	20010228	EP 1999-905499	19990128
R: DE, FR, GB, IT				
JP 2002516348	T2	20020604	JP 2000-550588	19990128
PRIORITY APPLN. INFO.:			US 1998-84073	A 19980522
			WO 1999-US1782	W 19990128
OTHER SOURCE(S):		MARPAT 132:12923		
AB The title membranes are prepd. by crosslinking with a species which generates an acidic functionality; the crosslinker preferably binds to acid functions by conversion of acid groups to imide functionality, which compensate for the acidity lost by the occupation of the acid groups and thus preserve membrane cond. while contributing to membrane strength and resistance to swelling.				
REFERENCE COUNT:		5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT		

L20 ANSWER 10 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:372625 HCAPLUS  
 DOCUMENT NUMBER: 129:41827  
 TITLE: Aqueous fluorochemical compositions and abrasion-resistant antifriction coatings  
 INVENTOR(S): Engle, Lori P.; Hamrock, Steven J.; Moore, George G. I.; Pellerite, Mark J.; Zhu, Dong-wei  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: U.S., 12 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5760126	A	19980602	US 1996-771786	19961220
WO 9828368	A1	19980702	WO 1997-US23677	19971217
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 946650	A1	19991006	EP 1997-952581	19971217
R: DE, FR, GB, IT				
JP 2001507071	T2	20010529	JP 1998-529027	19971217
PRIORITY APPLN. INFO.:			US 1996-771786	A 19961220
			WO 1997-US23677	W 19971217

AB Water-based coating compns. comprise an aq. soln., emulsion, or dispersion of (a) a water-sol. or water-dispersible polymer or oligomer having .gtoreq.1 anionic moiety capable of reacting with an oxazoline or oxazine moiety; (b) a water-sol. or water-dispersible polymer or oligomer having .gtoreq.1 oxazoline or oxazine moiety; and (c) a sol comprising a colloidal dispersion of surface-modified, inorg. microparticles in liq.; .gtoreq.1 of the components (a), (b), and (c) comprising .gtoreq.1 fluoroaliph. moiety. Thus, a coating compn. contained mercaptopropyltrimethoxysilane-modified colloidal SiO<sub>2</sub>, CX-WS 300 crosslinker, and FX 13 acrylate-2-carboxyethyl acrylate copolymer soln. and its cured film had water contact angle 117.degree..

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 11 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:183968 HCAPLUS  
 DOCUMENT NUMBER: 128:231696  
 TITLE: Monomers useful in radiation-curable floor finish coating compositions, coatable compositions thereof, and applying protective coatings and coated substrates with high gloss and durability using the same  
 INVENTOR(S): Hamrock, Steven J.; Onwumere, Fidelis C.; Wright, Bradford B.; Yandrasits, Michael A.  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA; Hamrock, Steven J.; Onwumere, Fidelis C.; Wright, Bradford B.; Yandrasits, Michael A.  
 SOURCE: PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811168	A1	19980319	WO 1996-US14666	19960913

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9669763	A1	19980402	AU 1996-69763	19960913
AU 723683	B2	20000831		
EP 929612	A1	19990721	EP 1996-930857	19960913
R: DE, FR, GB, IT				
BR 9612727	A	19990824	BR 1996-12727	19960913
CN 1229423	A	19990922	CN 1996-180434	19960913
JP 2001500185	T2	20010109	JP 1998-513589	19960913
US 6197844	B1	20010306	US 1999-242078	19990204
US 2003087981	A1	20030508	US 2001-27933	20011219

PRIORITY APPLN. INFO.:

WO 1996-US14666	W	19960913
US 1999-242078	A1	19990204
US 2001-799417	B3	20010305

AB The title monomers comprise (a) polyfunctional isocyanurate having at least three terminal reactive groups reacted with (b) hydroxyalkyl acrylate and (c) tertiary amine alc. in a molar ratio of a:b:c of about 1:1-2.5:0.5-2, wherein b + c is at least 3 and no greater than the total no. of terminal reactive groups of (a). A formulation comprised Desmodur N 3300-dimethylethanolamine-2-hydroxyethyl acrylate adduct (in 2.30:0.77:1.54 equiv. ratio) 50, SR-499 35, SR-306 15, and Darocur 1173 5 parts.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 12 OF 21 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:45238 HCAPLUS

DOCUMENT NUMBER: 128:47950

TITLE: Preparation, Structure, and Properties of Symmetrically 1,3-Difunctionalized Penta- and Hexafluorobicyclo[1.1.1]pentanes

AUTHOR(S): Levin, Michael D.; Hamrock, Steven J.; Kaszynski, Piotr; Shtarev, Alexander B.; Levina, Galina A.; Noll, Bruce C.; Ashley, Martin E.; Newmark, Richard; Moore, George G. I.; Michl, Josef

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Colorado, Boulder, CO, 80309-0215, USA

SOURCE: Journal of the American Chemical Society (1997), 119(52), 12750-12761

CODEN: JACSAT; ISSN: 0002-7863

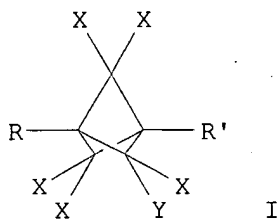
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 128:47950

GI



AB Exhaustive direct fluorination of di-Me bicyclo[1.1.1]pentane-1,3-dicarboxylate leads to di-Me pentafluorobicyclo[1.1.1]pentane-1,3-dicarboxylate [I; R,R',X,Y given in order for this and subsequent abstr. structures as CO<sub>2</sub>Me,CO<sub>2</sub>Me,F,H = 2] and hexafluorobicyclo[1.1.1]pentane-1,3-dicarboxylate (CO<sub>2</sub>Me,CO<sub>2</sub>Me,F,F = 3). The latter was hydrolyzed to the diacid (CO<sub>2</sub>H,CO<sub>2</sub>H,F,F = 4) and converted to the 1,3-dibromo and 1,3-diiodo analogs (Br,Br,F,F = 5 and I,I,F,F = 6) by the Hunsdieker reaction followed by treatment with SmI<sub>2</sub>. Na/NH<sub>3</sub> redn. of the disodium salt (CO<sub>2</sub>Na,CO<sub>2</sub>Na,F,F = 10) causes cage C-C bond cleavage. Single-crystal X-ray diffraction anal. of 3 revealed very short nonbonded F-F sepns. of 2.41 .ANG. and an interbridgehead distance of 1.979 .ANG., long compared with 1.875 .ANG. in 1,3-diacetylbicyclo[1.1.1]pentane [Ac,Ac,H,H = 19; cf. 1.954 .ANG. calcd. (MP2/6-31G\*) for 2,2,4,4,5,5-hexafluorobicyclo[1.1.1]pentane (H,H,F,F = 13)]. Calcn. suggests a strain energy of 102 kcal/mol (MP2/6-31G\*) for the hexafluorinated cage, compared with 68 kcal/mol for the parent bicyclo[1.1.1]pentane (H,H,H,H = 20). The remarkably low pK<sub>a</sub> values of 4 [0.73 and 1.34; cf. 3.22 and 4.26 for the parent diacid CO<sub>2</sub>H,CO<sub>2</sub>H,H,H = 24] originate in a direct field effect of fluorine atoms, combined with an increased s character of the exocyclic hybrid orbital on the bridgehead carbon in 4 (calcd. 34% in 13) relative to 24 (calcd. 30% in 20). Anal. of the strongly coupled nuclear spin systems of 2 and 3, based on a combination of two-dimensional NMR, spectral simulations, and GIAO-HF/6-31G\* calcns. of chem. shifts, revealed large and stereospecific long-range <sup>1</sup>H-<sup>13</sup>C, <sup>1</sup>H-<sup>19</sup>F, <sup>13</sup>C-<sup>19</sup>F, and <sup>19</sup>F-<sup>19</sup>F spin-spin coupling consts. The authors counsel caution in the use of pure fluorine.

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E230 THROUGH E417 ASSIGNED

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STRUCTURE FILE UPDATES: 23 SEP 2003 HIGHEST RN 591719-82-3  
DICTIONARY FILE UPDATES: 23 SEP 2003 HIGHEST RN 591719-82-3

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Experimental and calculated property data are now available. See HELP

PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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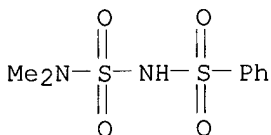
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STEREO ATTRIBUTES: NONE

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L24 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 259736-21-5 REGISTRY  
 CN Benzenesulfonamide, N-[(dimethylamino)sulfonyl]-, lithium salt (9CI) (CA  
 INDEX NAME)  
 MF C8 H12 N2 O4 S2 . Li  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL  
 CRN (34917-58-3)

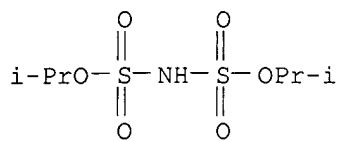


● Li

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:194398

L24 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 259736-19-1 REGISTRY  
 CN Imidodisulfuric acid, bis(1-methylethyl) ester, lithium salt (9CI) (CA INDEX NAME)  
 MF C6 H15 N O6 S2 . Li  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

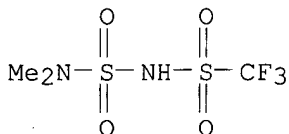


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1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:194398

L24 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 210227-17-1 REGISTRY  
 CN Methanesulfonamide, N-[(dimethylamino)sulfonyl]-1,1,1-trifluoro-, lithium salt (9CI) (CA INDEX NAME)  
 MF C3 H7 F3 N2 O4 S2 . Li  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL  
 CRN (210227-22-8)



● Li

3 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

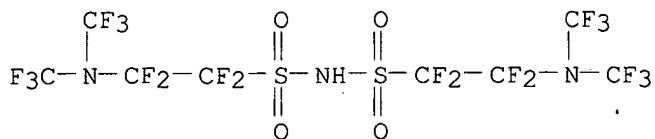
REFERENCE 1: 132:194398

REFERENCE 2: 130:211739

REFERENCE 3: 129:122975

L24 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 178175-54-7 REGISTRY  
 CN Ethanesulfonamide, 2-[bis(trifluoromethyl)amino]-N-[[2-[bis(trifluoromethyl)amino]-1,1,2,2-tetrafluoroethyl]sulfonyl]-1,1,2,2-tetrafluoro-, lithium salt (9CI) (CA INDEX NAME)  
 MF C8 H F20 N3 O4 S2 . Li  
 SR CA

LC STN Files: CA, CAPLUS, USPATFULL  
CRN (192998-59-7)



● Li

6 REFERENCES IN FILE CA (1907 TO DATE)  
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 135:197985

REFERENCE 2: 131:33832

REFERENCE 3: 130:184069

REFERENCE 4: 130:125082

REFERENCE 5: 127:136181

REFERENCE 6: 125:63143

L24 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN

RN 178175-53-6 REGISTRY

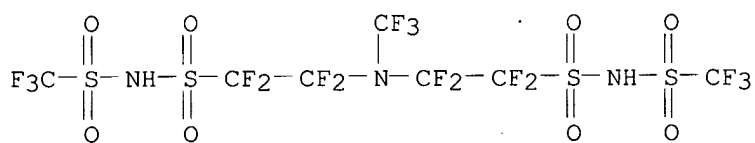
CN 2,4-Dithia-3,7-diazanonane-9-sulfonamide, 1,1,1,5,5,6,6,8,8,9,9-undecafluoro-7-(trifluoromethyl)-N-[(trifluoromethyl)sulfonyl]-, 2,2,4,4-tetraoxide, dilithium salt (9CI) (CA INDEX NAME)

MF C7 H2 F17 N3 O8 S4 . 2 Li

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CRN (220626-50-6)



●2 Li

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:184069

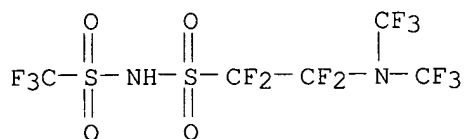
REFERENCE 2: 127:136181

REFERENCE 3: 125:63143

L24 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN

RN 178175-50-3 REGISTRY

CN Ethanesulfonamide, 2-[bis(trifluoromethyl)amino]-1,1,2,2-tetrafluoro-N-  
 [(trifluoromethyl)sulfonyl]-, lithium salt (9CI) (CA INDEX NAME)  
 MF C5 H F13 N2 O4 S2 . Li  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



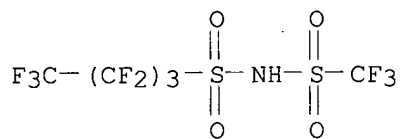
● Li

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:184069

REFERENCE 2: 125:63143

L24 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 176719-70-3 REGISTRY  
 CN 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-  
 [(trifluoromethyl)sulfonyl]-, lithium salt (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Lithium (perfluorobutanesulfonyl)(perfluoromethanesulfonyl)imide  
 CN Lithium trifluoromethanesulfonyl(nonafluorobutanesulfonyl)imide  
 MF C5 H F12 N O4 S2 . Li  
 SR CA  
 LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL  
 CRN (39847-37-5)



● Li

72 REFERENCES IN FILE CA (1907 TO DATE)  
 72 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:103709

REFERENCE 2: 138:404337

REFERENCE 3: 138:290464

REFERENCE 4: 138:190640

REFERENCE 5: 137:386916

REFERENCE 6: 137:313485



REFERENCE 7: 137:279825

REFERENCE 8: 137:235212

REFERENCE 9: 137:235210

REFERENCE 10: 137:235206

L24 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN

RN 132843-44-8 REGISTRY.

CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]-,  
lithium salt (9CI) (CA INDEX NAME)

OTHER NAMES:

CN L 13858

CN Lithium bis(pentafluoroethanesulfonyl)amide

CN Lithium bis(pentafluoroethanesulfonyl)imide

CN lithium bis(pentafluoroethylsulfonyl)imide

CN Lithium bis(perfluoroethylsulfonyl)imide

DR 200640-40-0, 230309-68-9

MF C4 H F10 N O4 S2 . Li

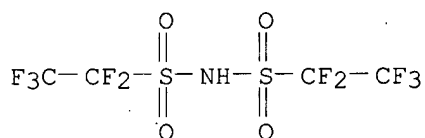
SR CA

LC STN Files: CA, CAPLUS, CASREACT, CHEMLIST, USPAT2, USPATFULL

Other Sources: TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

CRN (152894-10-5)



● Li

269 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

269 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:167015

REFERENCE 2: 139:166885

REFERENCE 3: 139:152387

REFERENCE 4: 139:103710

REFERENCE 5: 139:103709

REFERENCE 6: 139:85018

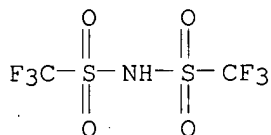
REFERENCE 7: 139:55478

REFERENCE 8: 139:39154

REFERENCE 9: 139:39125

REFERENCE 10: 139:37174

L24 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 90076-65-6 REGISTRY  
 CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,  
 lithium salt (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Bis[(trifluoromethyl)sulfonyl]imide lithium salt  
 CN Fluorad HQ 115  
 CN HQ 115  
 CN LiTFSI  
 CN Lithium bis(trifluoromethanesulfonyl)imide  
 CN Lithium bis(trifluoromethylsulfonyl)amide  
 CN Lithium bis(trifluoromethylsulfonyl)imide  
 CN Lithium bistriflamide  
 CN Lithium triflimide  
 DR 149330-06-3, 157306-34-8, 230309-67-8, 327155-75-9  
 MF C2 H F6 N O4 S2 . Li  
 CI COM  
 LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, DETHERM\*,  
 TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 CRN (82113-65-3)



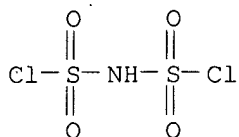
● Li

1261 REFERENCES IN FILE CA (1907 TO DATE)  
 33 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1269 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:199981  
 REFERENCE 2: 139:199980  
 REFERENCE 3: 139:199978  
 REFERENCE 4: 139:197840  
 REFERENCE 5: 139:182966  
 REFERENCE 6: 139:182914  
 REFERENCE 7: 139:182872  
 REFERENCE 8: 139:166946  
 REFERENCE 9: 139:166945  
 REFERENCE 10: 139:165270

L24 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2003 ACS on STN

RN 15873-42-4 REGISTRY  
CN Imidodisulfuryl chloride (7CI, 9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Bis(chlorosulfonyl)imide  
CN Imidobis(sulfuryl chloride)  
CN Iminodisulfuryl chloride  
MF Cl2 H N O4 S2  
CI COM  
LC STN Files: CA, CAOLD, CAPLUS, CASREACT, DETHERM\*, GMELIN\*, IFICDB,  
IFIUDB, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

44 REFERENCES IN FILE CA (1907 TO DATE)  
44 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:140965  
REFERENCE 2: 138:321759  
REFERENCE 3: 138:39050  
REFERENCE 4: 137:95521  
REFERENCE 5: 136:185786  
REFERENCE 6: 136:169440  
REFERENCE 7: 134:366596  
REFERENCE 8: 132:207879  
REFERENCE 9: 132:194398  
REFERENCE 10: 131:157787

=> fil hcaplus  
 FILE 'HCAPLUS' ENTERED AT 10:22:21 ON 24 SEP 2003  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 24 Sep 2003 VOL 139 ISS 13  
 FILE LAST UPDATED: 23 Sep 2003 (20030923/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>  
 =>

=> d stat que 132  
 L1 STR

G1~SO2-N~SO2G1  
 1 2 3 4 5

VAR G1=AK/CY  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
 L3 5778 SEA FILE=REGISTRY SSS FUL L1  
 L4 STR

F~G2~SO2-N~SO2G1  
 6 1 2 3 4 5

VAR G1=AK/CY  
 REP G2=(1-10) C  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
 L5 1150 SEA FILE=REGISTRY SUB=L3 SSS FUL L4  
 L10 25 SEA FILE=HCAPLUS ABB=ON PLU=ON ("HAMROCK STEVEN J"/AU OR

"HAMROCK STEVEN J"/IN OR "HAMROCK STEVEN JOSEPH"/AU OR  
 "HAMROCK STEVEN JOSEPH"/IN)  
 STR

L14

F~~G2~~SO2·N~~SO2G1~~N<sup>7</sup>  
 6 1 2 3 4 5 +1

VAR G1=AK/CY  
 REP G2=(1-10) C  
 NODE ATTRIBUTES:  
 CHARGE IS E+1 AT 7  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE  
 L15 STR

F~~G2~~SO2·N~~SO2Cy  
 6 1 2 3 4 5

REP G2=(1-10) C  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L16 111 SEA FILE=REGISTRY SUB=L5 SSS FUL L14 OR L15  
 L17 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L16  
 L20 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 NOT L17  
 L21 188 SEA FILE=REGISTRY ABB=ON PLU=ON (7631-86-9/BI OR 1314-23-4/BI  
 OR 13463-67-7/BI OR 13274-43-6/BI OR 1344-28-1/BI OR 25322-68-  
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-2/BI OR 187175-67-3/BI OR 189217-62-7/BI OR 191-53-7/BI OR  
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L22 STR

SO2-N~~SO2

1 2 3

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L23 10 SEA FILE=REGISTRY SUB=L21 SSS FUL L22  
 L25 10 SEA FILE=REGISTRY ABB=ON PLU=ON L23 NOT L16  
 L28 STR

C1 1

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 1

STEREO ATTRIBUTES: NONE  
 L29 9 SEA FILE=REGISTRY SUB=L25 SSS FUL L22 NOT L28  
 L30 9 SEA FILE=REGISTRY ABB=ON PLU=ON L29 NOT L16  
 L31 1403 SEA FILE=HCAPLUS ABB=ON PLU=ON L30  
 L32 1390 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 NOT (L17 OR L20)

=>  
 =>

=> d ibib abs hitrn 132 1380-1390

L32 ANSWER 1380 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1991:184787 HCAPLUS  
 DOCUMENT NUMBER: 114:184787  
 TITLE: Preparation of sulfonyl imides for solid solutions for  
 primary or secondary generators  
 INVENTOR(S): Armand, Michel  
 PATENT ASSIGNEE(S): Centre National de la Recherche Scientifique, Fr.;  
 Hydro-Quebec  
 SOURCE: PCT Int. Appl., 15 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9011999	A1	19901018	WO 1990-FR240	19900405

W: CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE

FR 2645533	A1	19901012	FR 1989-4504	19890406
FR 2645533	B1	19910712		
CA 2030809	AA	19901007	CA 1990-2030809	19900405
EP 419647	A1	19910403	EP 1990-907110	19900405
EP 419647	B1	19930901		

R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE

JP 04501118	T2	19920227	JP 1990-506618	19900405
AT 93844	E	19930915	AT 1990-907110	19900405
ES 2044587	T3	19940101	ES 1990-907110	19900405
US 5072040	A	19911210	US 1990-613642	19901203

PRIORITY APPLN. INFO.:

FR 1989-4504	19890406
EP 1990-907110	19900405
WO 1990-FR240	19900405

OTHER SOURCE(S):

MARPAT 114:184787

AB M[(RSO<sub>2</sub>)<sub>2</sub>N]<sub>y</sub> [M = alkali metal, alk. earth metal, etc.; R = aliph. radical, alicyclic radical, etc.; y = valence of M], capable of forming solid solns. with polymers for manuf. of solid polymeric electrolytes for primary or secondary generators (no data), were prepd. via, e.g., reacting an ionic nitride M<sub>3</sub>N<sub>y</sub> with a sulfonyl halide RSO<sub>2</sub>X (X = Cl, F) in an aprotic polar solvent. Li<sub>3</sub>N was autoclaved with CF<sub>3</sub>SO<sub>2</sub>F in THF at 50.degree. to give 90% LiN(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub> (I). A thin polymeric film was obtained by reaction of I with poly(ethylene oxide) in MeCN.

IT 90076-65-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for solid solns.)

L32 ANSWER 1381 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:175755 HCAPLUS

DOCUMENT NUMBER: 114:175755

TITLE: Solid polymer superionic conductors

AUTHOR(S): Alamgir, M.; Moulton, R. D.; Abraham, K. M.

CORPORATE SOURCE: EIC Lab., Inc., Norwood, MA, 02062, USA

SOURCE: Proceedings - Electrochemical Society (1991),  
91-3(Proc. Symp. Primary Second. Lithium Batteries,  
1990), 131-41

CODEN: PESODO; ISSN: 0161-6374

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Li+-conductive solid polymer electrolytes having room temp. conductivities of 2 .times. 10-3.OMEGA.-1 were synthesized by encapsulating certain mixed solvent org. electrolytes in a polymer network. These electrolytes of amorphous morphol. are prepd. as free-standing, thin films. A representative electrolyte comprises a soln. of LiClO<sub>4</sub> in a mixt. of ethylene carbonte and propylene carbonate immobilized within the support-matrix of polyacrylonitrile. Li/TiS<sub>2</sub> cell utilizing these electrolytes show excellent discharge performance at room temp., achieving 40% cathode utilization at the C/2 rate even in unoptimized lab. cells.

IT 90076-65-6

RL: DEV (Device component use); USES (Uses)  
(superionic conductor from)

L32 ANSWER 1382 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:154657 HCAPLUS

DOCUMENT NUMBER: 114:154657

TITLE: Ambient temperature solid polymer electrolyte devices

AUTHOR(S): Prasad, P. S. S.; Munshi, M. Z. A.; Owens, B. B.;  
Smyrl, W. H.

CORPORATE SOURCE: Corros. Res. Cent., Univ. Minnesota, Minneapolis, MN,  
55455, USA

SOURCE: Solid State Ionics (1990), 40-41(Pt. 2), 959-63  
CODEN: SSIOD3; ISSN: 0167-2738

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Poly(ethylene oxide) based solid polymer electrolytes with Li bis-perfluoroacylimide and lithium bis-perfluorosulfonylimide plasticizer salts have been investigated by complex impedance anal., DSC, and electrochem. performance in the Li/V6O13 electrode couple environment. Poly(ethylene oxide)-poly(ethylene glycol) based composite polymer blends with LiCF3SO3 salt were also studied as possible ambient temp. electrolytes. A third group of polymer electrolytes based on lithium salts doped into nonaq. gels were found to possess an ionic cond. of 4.5 .times. 10<sup>-4</sup> S/cm at 22.degree.. The material was used as an electrolyte in the fabrication of a thin film electrochem. cell (6.5 cm<sup>2</sup> area) with the Li/V6O13 electrode couple. Preliminary results indicated good reversibility, but interfacial polarization was significant.

IT 90076-65-6 132843-44-8

RL: USES (Uses)

(blends, with poly(ethylene oxide), as ion conducting solid polymer electrolytes for secondary lithium batteries)

L32 ANSWER 1383 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:146870 HCAPLUS

DOCUMENT NUMBER: 114:146870

TITLE: Dimensionally stable MEEP-based polymer electrolytes and solid-state lithium batteries

AUTHOR(S): Abraham, K. M.; Alamgir, M.

CORPORATE SOURCE: EIC Lab., Inc., Norwood, MA, 02062, USA

SOURCE: Chemistry of Materials (1991), 3(2), 339-48

CODEN: CMATEX; ISSN: 0897-4756.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several methods were developed to dimensionally stabilize electrolytes based on poly[bis(methoxyethoxy)ethoxy]phosphazene] (MEEP), using LiAlCl<sub>4</sub> to form free standing films. The mech. properties of dimensionally unstable MEEP-(LiX)<sub>n</sub> complexes (where X = anions) can be significantly improved by forming composites PEO, poly(propylene oxide), poly(ethylene glycol diacrylate), and poly(vinylpyrrolidinone). A cond. of 6.7 .times. 10<sup>-5</sup>/.OMEGA.-cm at 25.degree., exhibited by a 55% MEEP/45% PEO-[LiN(CF3SO2)<sub>2</sub>]<sub>0.13</sub> is among the highest values reported to date for a dimensionally stable electrolyte. The prepn. and cond., calorimetric, and electrochem. characterization of various electrolytes are described. Cyclic voltammetric data indicate that the polymers are anodically stable at .ltoreq.4.5 V vs. Li<sup>+</sup>/Li. The polymers have excellent compatibility with Li metal, making them suitable for use as Li<sup>+</sup> conductive solid electrolytes in solid-state Li batteries.

IT 90076-65-6

RL: USES (Uses)

(electrolyte, poly[bis(methoxyethoxyethoxy)phosphazene]-based blends contg., for lithium-titanium sulfide battery)

L32 ANSWER 1384 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:105617 HCAPLUS

DOCUMENT NUMBER: 114:105617

TITLE: New anions for use in polymer electrolyte rechargeable lithium batteries

AUTHOR(S): Dominey, L. A.; Blakley, T. J.; Koch, V. R.

CORPORATE SOURCE: Covalent Assoc., Inc., Woburn, MA, 01801, USA

SOURCE: Proceedings of the Intersociety Energy Conversion

Engineering Conference (1990), 25th(Vol. 3), 382-4

CODEN: PIECDE; ISSN: 0146-955X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polymer electrolytes based on poly[bis(methoxyethoxyethoxide)phosphazene], and LiC(CF3SO2)<sub>3</sub> and LiN(CF3SO2)<sub>2</sub> exhibit room temp. cond. of >1 .times.



10-4/.OMEGA.-cm. In both liq. nonaq. and solvent-free polymers,  $\text{Li}(\text{CF}_3\text{SO}_2)_3$  leads to conductivities higher than any other known org.-anion based Li salt. A Li/TiS<sub>2</sub> battery with the polymer electrolyte demonstrated room-temp. discharge capability and >70% cathode active material utilization at 70.degree..

IT 90076-65-6

RL: USES (Uses)

(electrolyte contg. poly[bis(methoxyethoxy)ethoxy phosphazene and, for lithium-titanium disulfide batteries)

L32 ANSWER 1385 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1991:46500 HCAPLUS

DOCUMENT NUMBER: 114:46500

TITLE: Solid redox polymerization electrodes and their use in all-solid-state batteries

AUTHOR(S): Visco, S. J.; Liu, M.; Armand, M. B.; De Jonghe, L. C.

CORPORATE SOURCE: Mater. Chem. Sci. Div., Lawrence Berkeley Lab., Berkeley, CA, 94720, USA

SOURCE: Molecular Crystals and Liquid Crystals (1990), 190, 185-95

CODEN: MCLCA5; ISSN: 0026-8941

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polydisulfides [from 2-mercaptoethyl ether, 2,5-dimercapto-1,3,4-thiadiazole (I), trithiocyanuric acid, etc.] of low equiv. wt. were prep'd. by oxidn. with I in aq. medium and used as high energy d. redox cathodes in batteries with Li or Na anodes and PEO/Li salt electrolyte. The redox mechanism of the polymn. electrodes is a reversible dimerization/scission reaction which occurs in 2 steps, where the rate-limiting step is electron transfer and the std. rate const. is a function of the alkyl chain substituent group. The polydisulfides have inherent reversibility towards many metal ions, in contrast to most intercalation compds. that have good reversibility only to Li. A battery with a I homopolymer film cathode and a Li anode had a c.d. and active material utilization much higher than those of Li/TiS<sub>2</sub> batteries.

IT 90076-65-6

RL: USES (Uses)

(electrolyte, PEO contg., lithium battery with polydisulfide cathode and, characteristics of)

L32 ANSWER 1386 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:620111 HCAPLUS

DOCUMENT NUMBER: 113:220111

TITLE: Suppression of staging in lithium-intercalated carbon by disorder in the host

AUTHOR(S): Dahn, J. R.; Fong, Rosamaria; Spoon, M. J.

CORPORATE SOURCE: Moli Energy (1990) Ltd., Burnaby, BC, V5C 4G2, Can.

SOURCE: Physical Review B: Condensed Matter and Materials Physics (1990), 42(10), 6424-32

CODEN: PRBMDO; ISSN: 0163-1829

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Electrochem. and x-ray-diffraction studies were made of the intercalation of lithium in graphite and in disordered carbons. The phase diagram of electrochem. intercalated graphite agrees well with previous work on samples prep'd. by chem. methods. The well-known staged phases present in intercalated graphite are absent in intercalated petroleum coke. Furthermore, the voltage V(x) of Li/LixC<sub>6</sub> cells differs greatly when graphite or coke is used as the host. By heating coke to successively higher temps., one is able to increase the graphitization or cryst. order of the host in a continuous fashion and study of the effect of this variation on the phase diagram of LixC<sub>6</sub> and on V(x). Staged phases are suppressed at room temp. for hosts less ordered than a "crit. disorder".

A lattice-gas model with random site energies is used to model the effects of host disorder and qual. explains the suppression of staged phases and the changes in  $V(x)$  with increasing disorder in the host. For a rectangular "d. of sites," staged phases are suppressed when the width of the site energy distribution is greater than the magnitude of the mean-field attractive Li-Li interaction, which causes island growth and staging in intercalated graphite.

IT 90076-65-6

RL: PRP (Properties)

(electrochem. intercalation of lithium by coke or graphite in propylene carbonate contg.)

L32 ANSWER 1387 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:535739 HCAPLUS

DOCUMENT NUMBER: 113:135739

TITLE: Sheet-supported thin lithium anode and its manufacture for batteries

INVENTOR(S): Belanger, Andre; Gauthier, Michel; Robitaille, Michel

PATENT ASSIGNEE(S): Hydro-Quebec, Can.

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 357859	A1	19900314	EP 1988-402277	19880909
EP 357859	B1	19931222		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 99077	E	19940115	AT 1988-402277	19880909
ES 2047573	T3	19940301	ES 1988-402277	19880909
JP 02094262	A2	19900405	JP 1988-228296	19880912
JP 2635713	B2	19970730		

PRIORITY APPLN. INFO.: EP 1988-402277 19880909

AB The anode is prepd. by applying a thin layer of molten Li, Li alloy, or doped Li to a thin layer of a plastic, preferably by rolling the plastic film or tape across a roller suspended in the molten Li. The Li thickness is controlled at 0.1-40  $\mu\text{m}$  and the layer is homogeneous and uniform. Suitable plastic substrates include polyethylenes, polypropylenes, polyesters, polyethers, polysulfones, and polyimides, esp. PEO and ethylene oxide-Me glycidyl ether copolymers. The battery electrolyte may be a polyether contg. a Li salt such as  $\text{LiClO}_4$ ,  $\text{LiCF}_3\text{SO}_3$ ,  $\text{LiB}_{12}\text{H}_{12}$ ,  $\text{LiAsF}_6$ ,  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ , or  $\text{LiBF}_4$ .

IT 90076-65-6

RL: USES (Uses)

(electrolytes contg., polyether, for lithium batteries)

L32 ANSWER 1388 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:426805 HCAPLUS

DOCUMENT NUMBER: 113:26805

TITLE: The stabilization of electrolytes for rechargeable lithium batteries

AUTHOR(S): Dominey, L. A.; Goldman, J. L.; Koch, V. R.; Nanjundiah, C.

CORPORATE SOURCE: Covalent Assoc., Inc., Woburn, MA, 01801, USA

SOURCE: Proceedings - Electrochemical Society (1990), 90-5(Proc. Symp. Rechargeable Lithium Batteries, 1989), 56-66

CODEN: PESODO; ISSN: 0161-6374

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Electrolytes contg.  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$  and  $\text{KO}_2$  and  $\text{KOH}$  additives offer improvements in the electrochem. and chem. stability of Li batteries. The  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$  electrolyte exhibits conductivities higher than most known Li salts, except  $\text{LiPF}_6$  and  $\text{LiAsF}_6$ . Li can be reversibly deposited in  $\text{LiN}(\text{CF}_3\text{SO}_2)_2/\text{solvent}$  electrolytes. Mechanisms involving Bronsted and Lewis acid neutralization are proposed to explain the improvements in Li/ $\text{TiS}_2$  battery cycling occurring when  $\text{KO}_2$  and  $\text{KOH}$  are added to  $\text{LiAsF}_6/\text{cyclic ether}$  electrolytes.

IT 90076-65-6

RL: USES (Uses)

(electrolyte, elec. cond. org. solvent solns. of, concn. effect on, for lithium batteries)

L32 ANSWER 1389 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:226635 HCAPLUS

DOCUMENT NUMBER: 112:226635

TITLE: Electrochromic window with lithium conductive polymer electrolyte

AUTHOR(S): Baudry, Paul; Aegerter, Michel Andre; Deroo, Daniel; Valla, Bruno

CORPORATE SOURCE: Inst. Fis. Quim. Sao Carlos, Univ. Sao Paulo, Sao Carlos, 13560, Brazil

SOURCE: Proceedings - Electrochemical Society (1990), 90-2(Proc. Symp. Electrochromic Mater., 1989), 274-87  
CODEN: PESODO; ISSN: 0161-6374

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An electrochromic window was built using  $\text{WO}_3$  as the electrochromic material and  $\text{V}_2\text{O}_5$  as the counter-electrode. Both were deposited onto ITO coated glass panes by vacuum evapn. and were amorphous to x-ray diffraction. The electrolyte was a lithium conducting polymer constituted by a poly(ethylene oxide)-lithium salt complex. The electrochem. characterization of electrodes was realized by cyclic voltammetry, coulometric titrn., and impedance spectroscopy, which allowed the detn. of the chem. diffusion coeffs. of Li into  $\text{WO}_3$  and  $\text{V}_2\text{O}_5$ . Potentiostatic cycling of the complete transmissive cell yields a transmission variation from 41 to 13% at 633 nm with a response time of 10 s at room temp.

IT 90076-65-6

RL: USES (Uses)

(electrolyte, with poly(ethylene oxide), for electrochromic window)

L32 ANSWER 1390 OF 1390 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1989:98805 HCAPLUS

DOCUMENT NUMBER: 110:98805

TITLE: New electrolyte solutions for batteries

INVENTOR(S): Armand, Michel; Gauthier, Michel; Muller, Daniel

PATENT ASSIGNEE(S): Societe Nationale Elf Aquitaine (SNEA), Fr.

SOURCE: Fr. Demande, 8 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

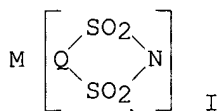
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2606217	A1	19880506	FR 1986-15114	19861030
FR 2606217	B1	19901214		
WO 8803331	A1	19880505	WO 1987-FR428	19871029
W: JP, US				
RW: AT, BE, CH, DE, GB, IT, LU, NL, SE				
EP 290511	A1	19881117	EP 1987-907236	19871029
EP 290511	B1	19950920		

R: AT, BE, CH, DE, GB, IT, LI, LU, NL, SE

JP 01501822	T2	19890622	JP 1987-506793	19871029
JP 07060688	B4	19950628		
CA 1330226	A1	19940614	CA 1987-550566	19871029
AT 128271	E	19951015	AT 1987-907236	19871029
US 5021308	A	19910604	US 1990-467358	19900123
US 5162177	A	19921110	US 1991-672327	19910320
US 5260145	A	19931109	US 1992-941555	19920908
PRIORITY APPLN. INFO.:			FR 1986-15114	19861030
			WO 1987-FR428	19871029
			US 1988-224915	19880630
			US 1990-467358	19900123
			US 1991-672327	19910320

OTHER SOURCE(S): MARPAT 110:98805  
GI



AB The electrolyte salt is  $M(\text{RSO}_2\text{NSO}_2\text{R}_1)$ ,  $M(\text{RSO}_2\text{NCOR}_1)$ ,  $M(\text{RCoNCoNCOR}_1)$ , or I, where M is an alkali, alk. earth, transition, or a rare-earth metal; R and  $\text{R}_1$  are identical or different and a perhalogenated (preferably perfluorinated) C1-12-group, and Q is a divalent perfluorinated C2-6 group. Suitable salts are  $\text{Li}(\text{CF}_3\text{SO}_2)_2\text{N}$ ,  $\text{Li}(\text{C}_4\text{F}_9\text{SO}_2)\text{N}$ ,  $\text{K}(\text{CF}_3\text{SO}_2\text{NCOCF}_3)$ , and  $\text{Na}(\text{CF}_3\text{SO}_2)\text{N}$  in solvents such as propylene carbonate, MeCN, and MeNO<sub>2</sub>. A Li-TiS<sub>2</sub> battery having glass-fiber separator impregnated with a 2M  $\text{Li}(\text{CF}_3\text{SO}_2)_2\text{N}$  in propylene carbonate electrolyte had a lifetime >100 charge-discharge cycles at .apprx.20.degree..

IT 90076-65-6  
RL: USES (Uses)  
(electrolytes, for lithium batteries)

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L33 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:225088 HCAPLUS

DOCUMENT NUMBER: 135:84664

TITLE: Ion conduction in **zwitterionic**-type molten salts and their polymers

AUTHOR(S): Yoshizawa, Masahiro; Hirao, Michiko; Ito-Akita, Kaori; Ohno, Hiroyuki

CORPORATE SOURCE: Department of Biotechnology, Tokyo University of Agriculture and Technology, Koganei, Tokyo, 184-8588, Japan

SOURCE: Journal of Materials Chemistry (2001), 11(4), 1057-1062

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors synthesized imidazolium cations contg. covalently-bound anionic sites, such as sulfonate or sulfonamide groups. These **zwitterionic** imidazolium salts form molten salts just like ordinary imidazolium salts. However, regardless of the high ion d., these ions cannot migrate along potential gradients induced in the bulk. This is a new and unique characteristic in molten salts. When other salts were added to this, the ions generated from the newly added salts were able to behave as carrier ions. The ionic cond. of a pure molten salt was  $10^{-9}$  S cm<sup>-1</sup> at 25.degree., but jumped to  $10^{-5}$  S cm<sup>-1</sup> by adding an equimolar amt. of Li bis(trifluoromethanesulfonyl)**imide** (LiTFSI) at 50.degree.. The **zwitterionic** salt having a sulfonamide group instead of sulfonate had an ionic cond. of  $10^{-4}$  S cm<sup>-1</sup> at 50.degree. after adding an equimolar amt. of LiTFSI. These **zwitterionic** imidazolium salts having vinyl groups were synthesized and polymd. In spite of their rubber-like properties they showed excellent ionic conductivities of approx.  $10^{-5}$  S cm<sup>-1</sup> at 50.degree. following the addn. of an equimolar amt.

of LiTFSI to the imidazolium cation unit.

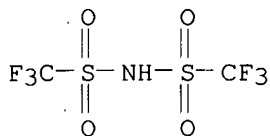
IT 90076-65-6, Lithium bis(trifluoromethanesulfonyl)**imide**

RL: TEM (Technical or engineered material use); USES (Uses)

(ionic cond. of imidazolium **zwitterion** molten salts)

RN 90076-65-6 HCAPLUS

CN Methanesulfonamide, 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]-,  
lithium salt (9CI) (CA INDEX NAME)



● Li

REFERENCE COUNT:

21

THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT